Contents

Part I Political, Social and Economic Dimensions of Sustainable Development	
Lessons Learned for Decision-Makers During a 5-Year Research Period on Sustainability Problems at the Galileo University in Guatemala	3
Nelson Amaro Using Design Thinking and Facebook to Accompany Women in Solving Water Problems in Morocco	25
A Critical Review of the Role of Indicators in Implementing the Sustainable Development Goals	41
A Minor Matter of Great Concern: The Different Sustainability Logics of 'Societal Benefits' and 'Socio-economic Profit'	57
Corporate Sustainable Strategies in Dom Pedro I Industrial Road Axis, São Paulo, Brazil João Luiz de Moraes Hoefel, Sônia Regina da Cal Seixas and Micheli Kowalczuk Machado	71
Water Resources in the Context of Global Environmental Change: Some Perspectives for Sustainability	87
Knowledge and Awareness of Sustainability in Saudi Arabian Public Universities	103

viii Contents

Urban Agriculture in Cape Town: Building Sustainable Livelihoods	129
D.W. Olivier	
Fostering Sustainable Communities and Resilient Cities Whilst Supporting 'Life on Land' Through a Colombian School's Initiative	145
J. Figueroa Vélez, V. Ruiz Vargas, L.M. Hoyos and A. Prowse	
Teaching Food Security to Low-Income Rural Families in the United States	161
A Holistic Approach to Embedding Social Responsibility and Sustainability in a University—Fostering Collaboration Between Researchers, Students and Operations. Liz Cooper and Dave Gorman	177
Multi-stakeholder Partnerships (SDG #17) as a Means of Achieving Sustainable Communities and Cities (SDG #11)	193
Pioneering in Sustainability Reporting in Higher Education: Experiences of a Belgian Business Faculty K. Ceulemans, T. Stough and W. Lambrechts	211
The Challenges of Implementing Sustainable Development Goals in Brazil: An Analysis Based on the Outcomes of the Brazilian Millennium Development Goals João Marcelo Pereira Ribeiro, Sthefanie Aguiar da Silva, Vitória Haendchen Fornasari, Larissa Pereira Cipoli Ribeiro, Pedro Sabino Parente and José Baltazar Salgueirinho Osório de Andrade Guerra	233
Corporate Policies on Rights and Engagement of Communities: Alternatives and Advances Noemi Bonina, Marcelo J. Meiriño and José Abadia Ribeiro	253
Local Sustainability Indicators and Their Role in the Implementation of the Sustainable Development Goals in the HE Sector	267
Putting the 'Social' into Sustainability Science	285

Contents ix

of Sustainable Development	
Implementing the Global Sustainable Goals (SDGs) into Municipal Strategies Applying an Integrated Approach	301
United Nations Sustainable Development Goals for 2030 and Resource Use	317
A Critical Analysis of the Sustainable Development Goals	341
Managing the Growing Kuala Lumpur Mega Urban Region for Livable City: The Sustainable Development Goals as Guiding Frame	357
Integration of Ecosystem Services as Part of the Nexus Approach into the Applied Teaching of Ecological Engineering Petra Schneider and Volker Lüderitz	369
Understanding Waste Flow in Malaysian Cities for Sustainable Waste Management	389
Going for Green Cities: The Role of Urban and Peri-Urban Forestry in Creating the Ambiance of the Liveable City in Malaysia	401
In Pursuit of Sustainability: Building Science and Community Development	419
Freedom from Poverty and the Right to Sustainable Development: One Goal but Different Rights and International Commitments Katarzyna Cichos	431
Sustainable Development and Climate Change	445
Lean Production and ISO Standards as Instrument for Achieving 2030 Agenda Goals	459

x Contents

Sustainable Transport Futures: Analysis of the Selected Methodologies Supporting the Planning Process Towards Achieving Goal 11 Sustainable Cities and Communities	173
Green Human Resource Management—Delivering High-Performance Human Resource Systems at Divine Word University Papua New Guinea	189
A Case Study on Lifestyles in the Southeast Asian Region from a Sustainable Consumption Point of View	513
A Systematic Approach to Adopt Sustainability and Efficiency Practices in Energy-Intensive Industries	523
Part III Holistic Approaches, Stakeholders Engagement and Education for Sustainable Development	
Environmental Campus Birkenfeld—A Role Model for Universities on How to Contribute to the Implementation Process of the Sustainable Development Goals	539
Indigenous and Sustainable Environmental Virtues in St. John Paul II Village in Infanta, Quezon (Philippines)	553
Local Spatial Planning Processes and Integration of Sustainability Perspective Through a Broad Systems Perspective and Systematic Approach	567
Designing Green Marketing Across Industries: A Conceptual Framework and Implications for Consumers and Transdisciplinary Research	581
Challenges of Ecosystem Resilience: An Aspect of the Sustainability Science Approach in the Study of Environmental Awareness in the Selayang Municipal Council, Selangor, Malaysia	597

Contents xi

Millennium Development Goals in Nigeria: Improving and Sustaining Growth Rate	613
Sustainability at German Universities: The University of Hamburg as a Case Study for Sustainability-Oriented Organizational Development	629
Scalability in Systemic Design Approach for Rural Development Silvia Barbero and Miriam Bicocca	647
Participatory Process for Local Development: Sustainability of Water Resources in Rural Communities: Case Manglaralto-Santa Elena, Ecuador Herrera F. Gricelda, Carrión M. Paúl and Alvarado M. Niurka	663
The Role of Systems Thinking in the Practice of Implementing Sustainable Development Goals Martin Reynolds, Christine Blackmore, Ray Ison, Rupesh Shah and Elaine Wedlock	677
Creating Circular, Efficient and Symbiotic Cities: And How Higher Education Should Contribute to Create the Solutions that are Required	699
Sustainable Diets: The Gulf Between Management Strategies and the Nutritional Demand for Fish	711
A Framework to Conceptualize Sustainable Development Goals for Fishing Gear Resource Management	727
Transportation Infrastructure Project Evaluation: Transforming CBA to Include a Life Cycle Perspective	745
Flood Vulnerability and the Three Dimensions of Sustainability Philosophy: An Innovative Concept Design for Rapid Assessment J. Wakeford, C. House, T.E. Butt, P. Paul and C.D. Beal	773
Transition Towards Sustainability in Hull University Business School: A Study of Curricular Sustainability in the Teaching Processes	783

xii Contents

From Education for Sustainable Development to Education for Environmental Sustainability: Reconnecting the Disconnected SDGs Mohamed Walid and Johannes M. Luetz	803
Cooking Courses in Higher Education: A Method to Foster Education for Sustainable Development and Promoting Sustainable Development Goals	827
Promoting Education for Sustainability Through Game-Based Learning: Using the Sustainable Strategies Game to Improve Students' Knowledge and Skills of Sustainable Business Practices Kay Emblen-Perry	849
A Summer School for Sustainable Management as a Strategy for Fostering Collaborative Competencies to Be Able to Build Multi-Actor Partnerships	867
Recognising Beach Kindy as a Pedagogical Approach for Critical Agents of Change Within Early Childhood Education	877
Perception Versus Skepticism—An Environmental Communication Issue and Climate Change C. House, N.L. Jordan, T.E. Butt, J. Kwan and A. Alam	893
"Do What I Say, Don't Do What I Do": Challenges on Education for Sustainability. Fernanda Frankenberger, Janaína Macke and Laurelena C. Palhano	903
(Inhibiting) Factors for (Un)Sustainable Behaviour in Relation to the Effects of Education for Sustainable Development: The Role of Psychological Constructs, Neurotransmitters and Ideological Impact on Consumer Behaviour Kristof Dewaele, Daniel Fischer, Patrick Van Damme and Paul Verhaeghe	915
Aligning Sustainable Development Principles and Sectoral Education	925
Teaching to End Hunger: Critical Analysis of Food Systems and Poverty	941
Rethinking Post-occupancy Evaluation for Sustainable Learning Environments Andrea Wheeler, Hina Illahe and Rucha Newalka	955

Contents xiii

The Role of Private-Public Partnerships in the Implementation of	
Sustainable Development Goals: Experience from the SDG Fund	969
Paloma Duran y Lalaguna and Ekaterina Dorodnykh	
The World Sustainable Development Research and Transfer	
Centre (WSD-RTC)	983
Walter Leal Filho	



http://www.springer.com/978-3-319-63006-9

Handbook of Sustainability Science and Research Leal Filho, W. (Ed.) 2018, XIII, 991 p. 148 illus., 109 illus. in color.,

Hardcover

ISBN: 978-3-319-63006-9