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Nota di contenuto	Cover; Half Title page; Title page; Copyright page; Chapter 1: Introduction to Life Cycle Assessment; References from the LCA Handbook; Aims of the Chapter; 1.1 Purpose of the Student Handbook; 1.2 Why LCA?; 1.3 Evolution of Environmental toward Life Cycle Thinking; 1.4 Examples of Environmental Impact Trade-Offs; 1.5 LCA Methodology; 1.6 Maintaining Transparency (Openness); 1.7 Conclusions; References; Chapter 1 Exercises; Chapter 2: Goal and Scope Definition in Life Cycle Assessment; References from the LCA Handbook; Aims of the Chapter; 2.1 Introduction 2.2 Components of a Well-Defined Study2.3 Consequential LCA; 2.4 Carbon Footprint versus LCA; 2.5 Creating a Goal Statement; 2.6 Preparing a Goal and Scope Document; References; Appendix: Hypothetical Example of a Comparative, Attributional Life Cycle Assessment to Support Government Decision Making; Chapter 2 Exercises; Chapter 3: Life Cycle Inventory; References from the LCA Handbook; Aims of the Chapter; 3.1 Introduction; 3.2 Modeling Inputs and Outputs; 3.3 Methodology Issues; 3.4 Data Uncertainty and Sensitivity Analysis; 3.5 Databases and Data Sources; 3.6 Collecting LCI

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3.7 Reporting Life Cycle Inventory3.8 Life Cycle Inventory Data Quality; 3.9 Economic Input/Output (EIO) Data; 3.10 Consequential LCA; 3.11 LCA Software; References; Chapter 3 Exercises; Chapter 4: Life Cycle Impact Assessment; References from the LCA Handbook; Aims of the Chapter; 4.1 Introduction; 4.2 Choice of Impact Models and Categories; 4.3 Current LCIA Approaches; 4.4 The Agri-Food Sector; 4.5 LCIA Models and Tools; References; Annex: Available Midpoint and Endpoint Characterization Methodologies; Chapter 4 Exercises
Chapter 5: Normalization, Grouping and Weighting in Life Cycle AssessmentReferences from the LCA Handbook; Aims of the chapter; 5.1 Introduction; 5.2 Current Practice of Normalization and Weighting in LCIA; 5.3 Principles of External Normalization; 5.4 Issues with External Normalization; 5.5 Inherent Data Gaps; 5.6 Masking Salient Aspects; 5.7 Compensation; 5.8 Spatial Boundaries and Time Frames; 5.9 Divergence in Databases; 5.10 Principles of Internal Normalization; 5.11 Compensatory Methods; 5.12 Partially Compensatory Methods; 5.13 Weighting; 5.14 Multi-Criteria Decision Making; References AppendixChapter 5 Exercises; Chapter 6: Life Cycle Assessment: Interpretation and Reporting; References from the LCA Handbook; Aims of the Chapter; 6.1 Introduction; 6.2 LCA Interpretation according to ISO; 6.3 Uncertainty and Sensitivity Analysis; 6.4 Contribution Analysis; 6.5 Presenting LCIA Results; 6.6 Preparing the Final Report; 6.7 The Review Process; 6.8 Product Category Rules and Environmental Product Declarations; References; Chapter 6 Exercises; Chapter 7: Life Cycle Sustainability Assessment; References from the LCA Handbook; Aims of the Chapter; 7.1 Introduction
7.2 Life Cycle Assessment and Sustainability

Sommario/riassunto

"This student version of the popular bestseller, Life Cycle Assessment Handbook, is not a watered-down version of the original, but retains all of the important information and valuable lessons provided in the first book, along with helpful problems and solutions for the student learning about Life Cycle Assessment (LCA). As the last several decades have seen a dramatic rise in the application of LCA in decision making, the interest in the life cycle concept as an environmental management and sustainability tool continues to grow. The LCA Student Handbook offers a look at the role that life cycle information, in the hands of companies, governments and consumers, may have in improving the environmental performance of products and technologies. It concisely and clearly presents the various aspects of LCA in order to help the reader better understand the subject. The international success of the sustainability paradigm needs the participation of many stakeholders, including citizens, corporations, academia, and NGOs. The handbook links LCA and responsible decision making and how the life cycle concept is a critical element in environmental sustainability. It covers issues such as building capacity in developing countries and emerging economies so that they are more capable of harnessing the potential in LCA for sustainable development. Governments play a very important role with the leverage they have through procurement, regulation, international treaties, tax incentives, public outreach, and other policy tools. This compilation of points to the clear trend for incorporating life cycle information into the design and development processes for products and policies, just as quality and safety concerns are now addressed throughout product design and development. The Life Cycle Assessment Student Handbook is not just for students. It is also a valuable resource for practitioners looking for a desktop reference on LCA or for any engineer, manager, or policy-maker wishing to learn about LCA. "--