1. Record Nr. UNINA9910821465103321

Autore Ferrao Paulo <1962->

Titolo Sustainable urban metabolism // Paulo Ferrao and John E. Fernandez

Pubbl/distr/stampa Cambridge, Massachusetts:,: The MIT Press,, [2013]

©2013

ISBN 0-262-31696-X

0-262-31695-1

Descrizione fisica xiii, 244 p. : ill

Disciplina 307.1/216

Soggetti Sustainable urban development

City planning

Urban ecology (Sociology)

Globalization

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Note generali Bibliographic Level Mode of Issuance: Monograph

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Urban metabolism: defining a field -- Industrial ecology: a metaphor

for sustainable development -- Urban metabolism: resource consumption of cities -- Intellectual foundations and key insights -- Industrial ecology: a framework -- Industrial ecology: a framework of tools and practices -- Industrial ecology tools applied to urban resource management -- Sustainable urban systems -- Green urban policies and development -- Urban typologies: prospects and indicators -- Complexity and dynamics of urban systems -- Integrated

approaches to sustainable urban metabolism -- Mapping and assessing urban metabolism -- Urban metabolism in practice: case studies from the developed world -- The challenge of urban metabolism in a

developing context.

Sommario/riassunto A unified framework for analyzing urban sustainability in terms of

cities' inflows and outflows of matter and energy. Urbanization and globalization have shaped the last hundred years. These two dominant trends are mutually reinforcing: globalization links countries through the networked communications of urban hubs. The urban population now generates more than eighty percent of global GDP. Cities account

for enormous flows of energy and materials--inflows of goods and

services and outflows of waste. Thus urban environmental management critically affects global sustainability. In this book, Paulo Ferrao and John Fernandez offer a metabolic perspective on urban sustainability. viewing the city as a metabolism, in terms of its exchanges of matter and energy. Their book provides a roadmap to the strategies and tools needed for a scientifically based framework for analyzing and promoting the sustainability of urban systems. Using the concept of urban metabolism as a unifying framework, Ferrao and Fernandez describe a systems-oriented approach that establishes useful linkages among environmental, economic, social, and technical infrastructure issues. These linkages lead to an integrated information-intensive platform that enables ecologically informed urban planning. After establishing the theoretical background and describing the diversity of contributing disciplines, the authors sample sustainability approaches and tools, offer an extended study of the urban metabolism of Lisbon, and outline the challenges and opportunities in approaching urban sustainability in both developed and developing countries.