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Descrizione fisica	1 online resource (XXIII, 243 p. 172 illus., 133 illus. in color.)
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Soggetti	Sustainability Geographic information systems Management Environmental management Geotechnical engineering Geographical Information System Environmental Management Geotechnical Engineering and Applied Earth Sciences
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Chapter 1. Spatial information technology: types, definitions and linkages -- Chapter 2. GIS database: spatial and non-spatial databases -- Chapter 3. Remote Sensing technology -- Chapter 4. Global Positioning System technology -- Chapter 5. Geo-Referencing system -- Chapter 6. Spatial mapping and sustainable resource management -- Chapter 7. Spatial database analysis -- Chapter 8. Map visualization process -- Chapter 9. Aerial Photography -- Chapter 10. Application and Case studies for the Sustainable Development Goals (five case studies including land use, agriculture, flood, watershed characterization and infrastructure assessment).
Sommario/riassunto	This textbook aims to develop a scientific knowledge base on spatial information technology to communicate the United Nations' Sustainable Development Goals (SDGs) among students, researchers, professionals and laymen. The book improves understanding of the spatial database and explains how to extract information from this for planning

purposes. To enhance the knowledge of geoscientists and environmentalists, the book describes the basic fundamental concepts to advance techniques for spatial data management and analysis and discusses the methodology. The Geographic Information System (GIS), remote sensing and Global Positioning System (GPS) are presented in an integrated manner for the planning of resources and infrastructure. The management of these systems is discussed in a very lucid way to develop the reader's skills. The proper procedure for map making and spatial analysis are included along with case studies to the reader. Where the first part of the book discusses the conceptual background, the second part deals with case studies using these applications in different disciplines. The presented case studies include land use, agriculture, flood, watershed characterization and infrastructure assessment for the Sustainable Development Goals.