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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Sustainable Water Engineering; Contents; Preface; Abbreviations; Glossary; 1 Water Crisis; 1.1 Water Resource Issues; 1.1.1 Water Footprint; 1.2 Climate Change and Its Influence on Global Water Resources; 1.3 Protection and Enhancement of Natural Watershed and Aquifer Environments; 1.4 Water Engineering for Sustainable Coastal and Offshore Environments; 1.5 Endangering World Peace and Security; 1.6 Awareness among Decision Makers and the Public across the World; 1.7 Criteria for Sustainable Water Management; 1.8 Water Scarcity and Millennium Development Goals 1.9 Lack of Access to Clean Drinking Water and Sanitation1.10 Fragmentation of Water Management; 1.11 Economics and Financial Aspects; 1.11.1 Water Treatment and Distribution; 1.11.2 Wastewater Treatment, Collection and Disposal; 1.12 Legal Aspects; References; 2 Requirements for the Sustainability of Water Systems; 2.1 History of Water Distribution and Wastewater Collection; 2.2 Integrated Water Management; 2.3 Sewerage Treatment and Urban Pollution Management; 2.4 Conventional Water Supply; 2.4.1 Features; 2.4.2

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	Capacity and Pressure Requirements
	<ul> <li>2.4.3 Design and Hydraulic Analysis of Distribution System2.4.4</li> <li>Unsustainable Characteristics; 2.4.5 Sustainable Approach; 2.5</li> <li>Conventional Wastewater Collection Systems; 2.5.1 Features; 2.5.2</li> <li>Unsustainable Characteristics; 2.5.3 Sustainable Approach; References;</li> <li>3 Water Quality Issues; 3.1 Water-Related Diseases; 3.1.1 Transmission</li> <li>Vectors; 3.1.2 Field Testing and Monitoring; 3.1.3 Village-Level</li> <li>Monitoring; 3.2 Selection Options for Water Supply Source; 3.2.1 Spring</li> <li>Capping; 3.2.2 Simple Tube Wells; 3.2.3 Hand Pumps; 3.2.4 Rainwater</li> <li>Harvesting; 3.2.5 Fog and Dew Harvesting</li> <li>3.2.6 Snow Harvesting3.3 On-Site Sanitation; 3.3.1 Latrines; 3.3.2</li> <li>Septic Tanks; 3.3.3 Aqua Privies; 3.3.4 Oxidation Pond Treatment</li> <li>Systems; 3.3.5 Storm Drainage; 3.4 Water Quality Characteristics of</li> <li>Potable Drinking Water and Wastewater Effluents; 3.4.1 Physical</li> <li>Parameters; 3.4.2 Chemical Parameters; 3.4.3 Solids in Water; 3.4.4</li> <li>Biological Parameters; 3.5 Standards and Consents; 3.5.1 Potable Water</li> <li>Standards; 3.5.2 Wastewater Effluent Standards; 3.6 Kinetics of</li> <li>Biochemical Oxygen Demand; 3.7 Water Management for Wildlife</li> <li>Conservation; 3.8 Water-Quality Deterioration; References</li> <li>4 Fundamentals of Treatment and Process Design, and Sustainability4.1</li> <li>History of Water and Wastewater Treatment Regulatory Issues across</li> <li>the World; 4.1.1 Low-Tech versus Hi-Tech; 4.1.2 Low Cost versus High</li> <li>Cost; 4.2 Design Principles for Sustainable Treatment Systems; 4.2.1</li> <li>Low Carbon; 4.2.2 Low Energy; 4.2.3 Low Chemical Use; 4.2.4</li> <li>Modelling of Treatment Processes to Attain Sustainability; 4.2.5</li> <li>Operation, Management, Financial, Socio-Economic Aspect; 4.3</li> <li>Preliminary and Primary Treatment; 4.3.1 Screening; 4.3.2 Coarse-Solid</li> <li>Reduction; 4.3.3 Grease Removal Chamber; 4.3.4 Flow Equalization</li> <li>4.3.5 Mixing and Flocculation&lt;</li></ul>
Sommario/riassunto	Ensuring safe and plentiful supplies of potable water (both now and for future generations) and developing sustainable treatment processes for wastewater are among the world's greatest engineering challenges. However, sustainability requires investment of money, time and knowledge. Some parts of the world are already working towards this goal but many nations have neither the political will nor the resources to tackle even basic provision and sanitation. Combining theory and practice from the developing and developed worlds with high- and low-tech, high- and low-cost solutions, this book di