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Nota di contenuto	Module 1: Rethinking Infrastructure Design For Multi-Use Water Services -- 1. Introduction -- 2. The Most Apparent Impacts of Climate Changes And Variability -- 3. What Is Wrong with Existing Systems? -- 4. What Is the Blue Green Solution Concept? -- 4.1 Reduced Pluvial Flood Risk -- 4.2 Water Pollution -- 4.3 Alternative Water (Re)Sources -- 4.4 Urban Heat Island -- 4.5 Air Pollution -- 4.6 Droughts -- 4.7 Urban Agriculture -- 4.8 Urban Amenity and Blue Green Corridors -- 5. Conclusions -- References -- Module 2: What Are the Main Options For Applying the Blue-Green Dream -- 1. Introduction -- 2. Wastewater Reuse And Recycling -- 3. Urban Green Spaces -- 4. Rainwater Harvesting -- 5. Green Roofs -- 6. Urban Agriculture -- 7. Living Wall Systems -- 8. Decentralized Systems To Manage and Reuse Stormwater Runoff On-Site -- 9. Integrating Blue and Green Measures -- 10. How Can We Calculate the Value of Blue Green Systems?- 11. Tools For Supporting Urban Blue-Green Design -- 12. References -- Module 3: Case Studies Illustrating The Blue-Green Options -- 1. “Four Alls For

All”: Policy Act On Decentralized Water Supply Through Rainwater Harvesting and Management Systems in Seoul -- 2. Water Sensitive Urban Design in Lynbrook Estate, Melbourne, Australia -- 3. Green City, Clean Waters: The Vision Of Philadelphia -- 4. Integrated Water Recycling in Brisbane, Australia -- 5. Bedzed – Zero Energy Development -- References.

Sommario/riassunto

As we approach a historic tipping point in the global trend toward urbanisation – within two decades urban dwellers will increase from 49% to 60% of the planet’s population – this book identifies and addresses a critical problem: water. The editors show how cities can shift from being water consumers to resource managers, applying urban water management principles to ensure access to water and sanitation infrastructure and services; manage rainwater, wastewater, storm water drainage, and runoff pollution; control waterborne diseases and epidemics; and reduce the risk of such water-related hazards as floods, droughts and landslides. The book explores the Multiple-Use Water Services (MUS) paradigm, offering a section on the MUS approach and a means of calculating the value of MUS systems, as well as tools and resources to support decision-making. Case studies illustrate MUS in selected urban and rural contexts. Each case study breaks out the challenges, policy framework, benefits, benchmarks, lessons learned (success and failures) and potential next steps. The contributors consider the main options for applying the Multiple-Use Water Services (MUS) paradigm, breaking down its components and offering cost-benefit analyses along with challenges and considerations for both the short and long term. Also discussed are methods by which mutual interactions of water infrastructure and vegetated areas are taken into account in the synergy of spatial planning and optimised modelling of ecosystems’ performance indicators. This method of planning should make future developments cheaper to build; their users will pay lower utility bills for water, energy and heating. These developments will be more pleasant to live in and property value would likely be higher. The brief includes a section on the MUS approach and a means to calculate the value of MUS systems, as well as provides tools and resources to support decision-making. Case studies are included to illustrate MUS in selected urban and rural contexts. Each case study breaks out the challenges, policy framework, benefits, benchmarks, lessons learned (success and failures) and potential next steps.