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Shifting to Healthier Cities with Improved Urban Ecological Infrastructure: From the Perspectives

of Planning, Implementation, Governance and Engineering

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Highlights:

- Urban ecological infrastructure (UEI) is the main carrier of ecosystem services in urban areas.
- UEI provides a promising approach to combat such urban challenges and at the same time increases urban sustainability and resilience.
- Articles in this special volume (SV) addressed governance, engineering and technologies for improving UEI.
- Concepts, theories, best practices, barriers and enablers of UEI were documented on seven integrated themes.
- 4 Authors in this SV developed and used tools to promote holistic, co-benefits in UEI management.

Abstract:

Ecosystem services losses have worsened already serious urban problems such as heat island effects, urban flooding, and biodiversity losses. Urban ecological infrastructure (UEI) is the main carrier of ecosystem services in urban areas and provides a promising approach to combat such urban challenges and at the same time increases urban sustainability and resilience. The objectives of this special volume (SV) were to provide systematic reviews and discussions of the new governance, engineering and technologies available for improving UEI, which can be used to promote the development application of improved urban ecological engineering theories, methods and tools. Seven themes are included in this SV: (1) From civil infrastructure to ecological infrastructure: diagnoses and remedies of urban illnesses; (2) International experiences and lessons in urban "green-blue" ecological engineering to develop and to enforce standards for restoration of natural and social ecosystem services; (3) Implementation of integrated urban waste management, recycling and treatment policies and facilities; (4) Design and modify urban impervious surfaces through ecological engineering; (5) Urban aorta ecology, ecological mobility and livable corridors; (6) Integrative design criteria and cases of urban ecological infrastructure management; (7) The roles of urban ecological infrastructure in industrial parks and industrial clusters. This SV included forty-one, high-quality papers on theories and practices in UEI and in urban

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