

Book Review

Soils within Cities: Global approaches to their sustainable management – composition, properties, and functions of soils of the urban environment

Levin/Kim/Morel/Burghardt/Charzynski/Shaw (Eds.), February 2017 by Schweizerbart Science Publishers in the series GeoEcology Essays, 253 pages, 113 figures, 23 tables, ISBN 978-3-510-65411-6. The book can be ordered from the IUSS Secretariat (iuss@umweltbundesamt.at) at the price of €29.90 plus shipping costs; a reduced rate of €25.00 (plus shipping) is available for IUSS members.

Reviewed by
Winfried E.H. Blum

University of Natural Resources and Life Sciences Vienna (BOKU), Institute of Soil Research, Peter-Jordan-Straße 82, 1190 Vienna, Austria, winfried.blum@boku.ac.at

This book is the second publication, edited on behalf of the International Union of Soil Sciences (IUSS) as a result of joined efforts of the international working group “Soils of the Urban, Traffic, Mining and Military Areas” (SUITMA) in the framework of the International Decade of Soils (2015–2024). The first publication was “Task Force: Soil-Matters – Solutions Under Foot”. Both publications appeared in the series GeoEcology Essays of CATENA Soil Sciences of Schweizerbart Science Publishers.

“Soils within Cities” highlights the role and importance of soils in the cities, which are of paramount importance in view of sustainable conditions for human living. Actually, at the global level yearly about 150 million people move from rural into urban areas or are born there, nearly the double of the annual population increase.

The book comprises 10 chapters with 34 short contributions, discussing comprehensively key aspects and charac-

teristics of soils in urban and peri-urban ecosystems as well as the problems and challenges associated with them.

After a short introduction, the composition, properties, and functions of soils in the urban environment are explained in detail. The next chapters deal with the pedogenic evolution of urban soils, their classification, and survey, with case studies from Germany, Poland, Russia and the United States of America.

A chapter describing the management of soils in the urban environment explains the importance of soils for the green infrastructure of cities, waste capping systems processes and their consequences, pedological engineering for brownfield reclamation, the use of wastes for the construction of fertile urban soils, and the numerous ways and techniques of soil sealing and its management in the urban environment.

A further chapter deals with urban agriculture, garden soils in industrialized countries as well as the recovery of strategic metals from urban soils.

A large chapter covers comprehensively the ecosystem services provided by urban soils such as storage of carbon and nutritive elements and their importance for the protection of biodiversity as well as for the filtration of rainwater and the groundwater protection.

The last chapter gives an introduction into the key initiatives on soil awareness by the global soil science communities

such as the annual World Soil Day on the 6th of December, the International Year of Soils 2015, and the International Decade of Soils 2015-2024.

This book is well written and easily understandable. It can therefore be recommended to all those interested in the terrestrial and aquatic ecology of urban and peri-urban agglomerations and their sustainable management, including educational institutions and the broad public living in urban environments.