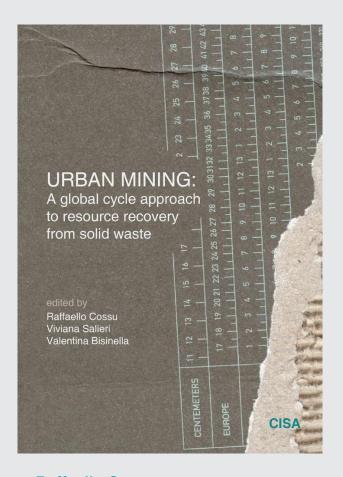
URBAN MINING: A global cycle approach to resource recovery from solid waste edited by: Raffaello Cossu, Viviana Salieri, Valentina Bisinella



The passage from a linear to a circular approach has characterised waste management strategies over the last few decades. Attention is currently moving from the limited and fixed stocks of raw materials to the increasing anthropogenic stocks of materials. Urban Mining activities operate in this context, representing actions and technologies finalized towards the recovery of secondary raw materials and energy from products of the urban catabolism. Urban Mining therefore provides a systematic management of anthropogenic resources stocks (products and buildings) and waste, in the view of long term environmental protection, resource conservation and economic benefits. This monograph includes some of the most significant scientific contributions on Urban Mining presented during the Conferences organized by IWWG, in particular the Symposium in Bergamo, and constitutes a useful tool for professionals and administrators involved in the field.

CISA Publisher, 440 pages, ISBN 978-88-6265-001-4

__ Raffaello Cossu

Full Professor of Waste Management, Head of the Environmental Engineering Program at the University of Padova. Studies of Chemical Engineering at the Technical University (Politecnico) of Milan. Past President of IWWG (International Waste Working Group). Editor in Chief of Waste Management Journal, published by Elsevier, Amsterdam

__ Viviana Salieri

Research fellow at the University of Padova. Studies of Environmental Engineering at the same University. Main fields of interest are sustainable waste management strategies and full scale landfilling performance. Scientific Secretary of SUM2012, Symposium on Urban Mining.

__ Valentina Bisinella

Studies of Environmental Engineering at the University of Padova. Main research experiences within the Sanitary Engineering Unit at the same University, dealing with sustainable waste management strategies.

Buy this book on: www.cisapublisher.com price 80 €

To ensure a widespread distribution of the books the cover price has been kept as low as possible by the insertion of a few advertising pages, which in no way affect the content of the book

TABLE OF CONTENTS

Introduction: The Urban Mining concept R. Cossu, V. Salieri, V. Bisinella

1. Strategies

Innovative technologies and processing architectures in Urban Mining: Two key issues to ensure secondary raw materials supply

S. Serranti, F. Di Maio, P. Rem, G. Bonifazi

Links between primary (extracted) and secondary (recycled) mineral resources

D. Guyonnet, C. Hocquard, F.W. Wellmer

Incentives for a recycling-oriented waste management: Evaluation of instruments of Extended Producer Responsibility *V.S. Rotter*

The Extended Producer Responsibility in medicine packaging waste: Portuguese approach

A. Cardoso, B. Mendes

The informal sector in SWM: Economic arguments and political framework for its integration

E. Gunsilius, S. Spies, S. García Cortés

Economic aspects of waste management in Italy net of incentives and penalties

R. Cossu, S. Masi

2. Waste from Electrical and Electronic Equipment (WEEE)

WEEE: No waste anymore but secondary raw material *F. Andreola, L. Barbieri, M. Cannio, R. Giovanardi, I. Lancellotti, P. Pozzi, E. Soragni*

Identification and recovery of rare metals in electric and electronic scrap

N. Menad, J.A. Van Houwelingen

Limits of resource recovery and waste management with regard to Electric and Electronic Equipment

H. Friege

Efficiency of take back systems for Waste Electrical and Electronic Equipment in Europe

S. Salhofer

3. End of Life Vehicles (ELV)

Car fluff management

R. Cossu, R. Gadia

Recycling options of car parts and their environmental burdens *S. Scherhaufer, P. Beigl*

Treatment processes for the valorisation of End of Life Vehicles (ELVs) residues

S. Fiore, B. Ruffino, M.C. Zanetti

Novel and innovative thermal process for energy efficient and environmentally sound fluff disposal

P. Viotti, R. Tamma, L. Lombardi, G. Mancini

4. Tyres

Technological innovations in End of Life Tyres recovery and recycling

A. Bonoli, S. Tondelli, M. Bergonzoni

Use of shredded End of Life Tyres for drainage in leachate recirculation trenches, biogas drainage and drainage of water under cover in MSW landfills

G. Didier, R. Moretto, A. Budka, A. De Cazenove Energy valorization of tyres waste: A multi-step approach

E.C. Rada, R. Dal Maschio, M. Ischia, M. Ragazzi

Implementing the Extended Producer Responsibility for End of Life Tyres: The Italian case

G. Corbetta, D. Fornai, G. Rimondi

5. Construction and Demolition (C&D) Waste

C&D waste management for sustainable reconstruction after catastrophic events

C. Furcas, G. Balletto

Analysis of the use of Civil Construction Waste (CCW) in soil improvement

A.B. De Farias, R.A. De Medeiros Junior, S.P. Fucale, A.D. Gusmão

6. Combustion Residues

State-of-the-art and outlook on management of waste-toenergy bottom ashes: Treatment

A. Polettini, T. Astrup, G. Cappai, P. Lechner, A. Muntoni, R. Pomi, T. Van Gerven, A. Van Zomeren

State-of-the-art and outlook on management of waste-toenergy bottom ashes: Utilization

T. Astrup, G. Cappai, P. Lechner, A. Muntoni, A. Polettini, R. Pomi, T. Van Gerven, A. Van Zomeren

Using ash in a sustainable society: Swedish R&D case *H. Bjurström, R. Herbert, C. Ribbing, G. Tham*

The LECA from fly ash after sewage sludge treatment: Possibilities of reuse in constructed wetlands

A. Białowiec, W. Janczukowicz, M. Krzemieniewski, Z. Gusiatin

Intrinsic properties of new materials for civil engineering works based on the reuse of MSWI bottom ashes: Chemical and ecotoxicological assessment

N. Lapa, R. Barbosa, B. Mendes

7. Plastic Residues

Residues from the mechanical sorting of source segregated plastics: Management and LCS of different utilization scenarios

G. Rossi, C. Spreafico, S. Bonvino, A. Casula, R. Cossu, F. Simion, A. Vivona

Dechlorination and recovery of PVC

P. Plescia, G. Paoloni, M.A. Tocino, R. Sottile

The use of post consumer plastic waste for the production of wood plastic composites: A Review

S. Mehmood, A. Khaliq, S.A. Ranjha

8. Road sweeping waste

Recovery of road sweeping waste P. Bevilacqua, L. Jagodic, E. Esposito

9. Landfill Mining

Theory and perspectives of Landfill Mining

R. Cossu, R. Raga

Planning and economic constraints related to a Landfill Mining project in Norway

M. Hogland, B. Berg, W. Hogland, M. Marques

Wood waste disposed of in landfills in Australia: An evaluation of the amount and potential use for bioenergy

J.A. Taylor, A. Herr, D.R. Farine

Landfill in situ aeration for emission control and landfill mining

R. Cossu, R. Raga, G. Testolin

Environmental reclamation of the Campodarsego (PD) controlled waste landfill

E. Cossu, A. Artuso

Enhanced landfill mining: A future perspective for landfilling D. Geysen, P.T. Jones, K. Van Acker, S. Van Passel, M. Craps, J. Eyckmans, K. Vrancken, B. Laenen, P. Laevers

For orders and further information please contact:

CISA Publisher / Via Beato Pellegrino, 23 – 35137 Padova, Italy

Tel. +390498726986 / fax. +390498726987 / info@cisapublisher.com / www.cisapublisher.com