Environmental Engineering and Management Journal

August 2017, Vol.16, No. 8, 1673-1684
http://omicron.ch.tuiasi.ro/EEMJ/

"Gheorghe Asachi" Technical University of Iasi, Romania

SMART GROUND PROJECT: A NEW APPROACH TO DATA ACCESSIBILITY AND COLLECTION FOR RAW MATERIALS AND SECONDARY RAW MATERIALS IN EUROPE

Giovanna Antonella Dino[1]*, Piergiorgio Rossetti[1], Giulio Biglia[1], Maria Luisa Sapino[1], Francesco Di Mauro[1], Heikki Särkkä[2], Frederic Coulon[3], Diogo Gomes[3], Lucía Parejo-Bravo[4], Pilar Zapata Aranda[4], Antonia Lorenzo Lopez[4], Jorge Lopez[5], Ernő Garamvölgyi[6], Sandra Stojanovic[6], Antonietta Pizza[7], Marco de la Feld[7]

[1]University of Torino - Via Valperga Caluso 35, Torino 10125, Italy
[2]South-Eastern Finland University of Applied Sciences, Patteristonkatu 3 D, 50100 Mikkeli, Finland
[3]Cranfield University, School of Water, Energy and Environment, Cranfield, MK43 0AL, UK
[4]Bioazul, Avenida Manuel Agustin Heredia, 29001 Malaga, Spain
[5]ATOS - Calle de Albarracin 25, Madrid 28037, Spain
[6]BZN - FEHERVARI UT 130, Budapest 1116, Hungary
[7]ENCO srl - via Michelangelo Schipa 115, Napoli 80122, Italy

Abstract

Steady Raw Materials (RM) supply is essential for the EU economy and increasingly under pressure to sustain the businesses and industries demand. The supply of RM is not only a matter of availability of primary but also of secondary raw materials (SRM). In fact a great amount of waste can be regained as practical and valuable SRM by enhancing the recovery processes from industrial, mining and municipal landfill sites, especially if we consider that Europe is highly dependent on the imports of several RM. Nevertheless, there is to date no inventory of SRM at EU level. Smart Ground project aims to facilitate the availability and accessibility of data and information on SRM in the EU, as well as creating synergy and collaboration between the different stakeholders involved in the SRM value chain. In order to do so, the Smart Ground consortium is carrying out a set of activities to integrate in a single EU database all the data from existing sources and new information retrieving pilot landfills as progress is made. Such database will enable the exchange of contacts and information among the relevant stakeholders, interested in providing or obtaining SRM. Finally, Smart Ground project will also spin out the SRM economy and employment thanks to targeted training activities, organized during congresses and dedicated meeting with stakeholders and end users interested in calculating the potentiality for SRM recovery from selected landfills, contemporary constituting a dedicated network of stakeholders committed to cost-effective research, technology transfer and training.

Key words: circular economy, extractive waste, landfill mining, municipal solid waste, secondary raw materials

Received: February, 2017; Revised final: July, 2017; Accepted: August, 2017

* Author to whom all correspondence should be addressed: e-mail: giovanna.dino@unito.it; Phone: 0039.011.6705150