



Enhanced Landfill Mining in the EU-28 & recovery of critical raw materials

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Meeting Operational Groups EIP Raw Materials (14-4-2016, Plaza Hotel, Brussels)



EURELCO EIP RMC 67 Factsheet

EURELCO is an open, quadruple helix network that supports the required (...) innovation with respect to Enhanced Landfill Mining within the context of a transition to a resource efficient, circular, low-carbon economy. www.eurelco.org



LEGEND

| Country | Percentage |
|-----------------|------------|
| AUSTRIA | 10% |
| BELGIUM | 10% |
| DENMARK | 10% |
| ESTONIA | 10% |
| FINLAND | 10% |
| GERMANY | 10% |
| GREECE | 10% |
| ITALY | 10% |
| PORTUGAL | 10% |
| SPAIN | 10% |
| SWEDEN | 10% |
| THE NETHERLANDS | 10% |
| UK | 10% |

57 members in 13 European countries



57 Members
(incl. 25
companies,
€1000
membership
fee)

5 Working Groups
Mapping - S/T - System
conditions -
Projects -
Dissemination

Landfills in EU-28 - Parliamentary Question H. VAUTMANS (ALDE) & Response K. VELLA (EC) 28-7-2015



Has the Commission performed any calculations on the future remediation costs for the EU-28? **NOT YET**

Has the Commission performed a mapping of the resource potential of its 150,000 to 500,000 landfills? **NOT YET**

Does the Commission plan to support R&D and/or pilot activities, as well as demonstration projects, which explicitly address Enhanced Landfill Mining? **NOT YET**

EUROPEAN PARLIAMENT

FORM FOR TABLING A QUESTION FOR
WRITTEN ANSWER (Rule 130)

EN

Select only one addressee:

PRESIDENT OF THE EUROPEAN COUNCIL



COUNCIL



VICE-PRESIDENT / HIGH REPRESENTATIVE



COMMISSION



Priority question



AUTHOR(S): Hilde VAUTMANS

SUBJECT: Stimulating Enhanced Landfill Mining as part of the transition to a circular economy
(please specify)



European Parliament

Enhanced Landfill Mining Seminar
20-10-2015



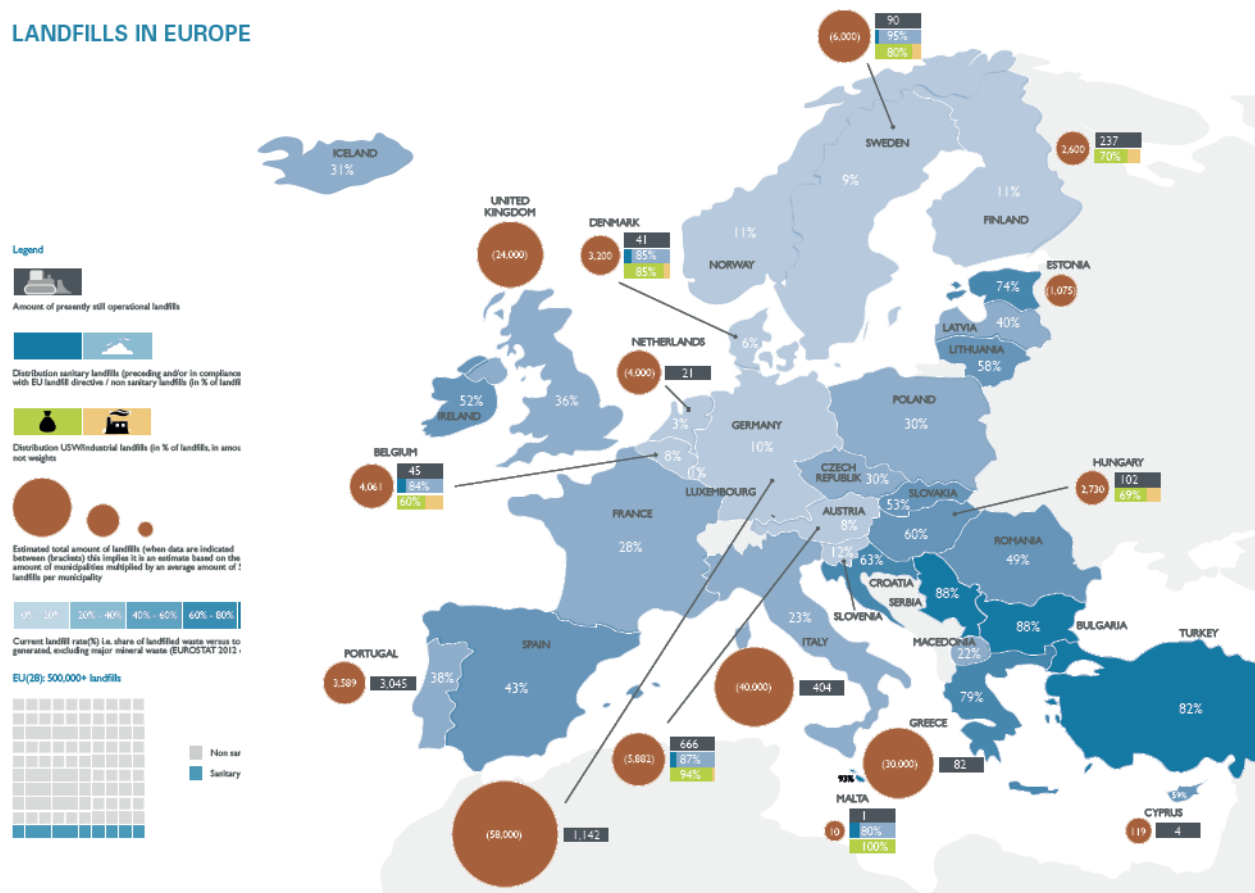
Landfills in EU Infographic EURELCO



European Parliament

Enhanced Landfill Mining Seminar
20-10-2015

LANDFILLS IN EUROPE





EP ELFM Seminar Conclusions

Improved inventories of Europe's landfills are required in view of risks and resource recovery potential

- USW landfills
- Monolandfills containing mining waste & industrial residues incl. critical metals

A vision for managing and mining Europe's landfills needs to be developed

Major attention should go out to develop and demonstrate a set of innovative technologies that deliver high added-value outputs from USW landfills

- Successful, iconic large-scale demonstration project is needed to cross the Valley of Death
- Require specific support instruments from EC/EP

Monolandfills: S/T challenges strongly dependent on residue type

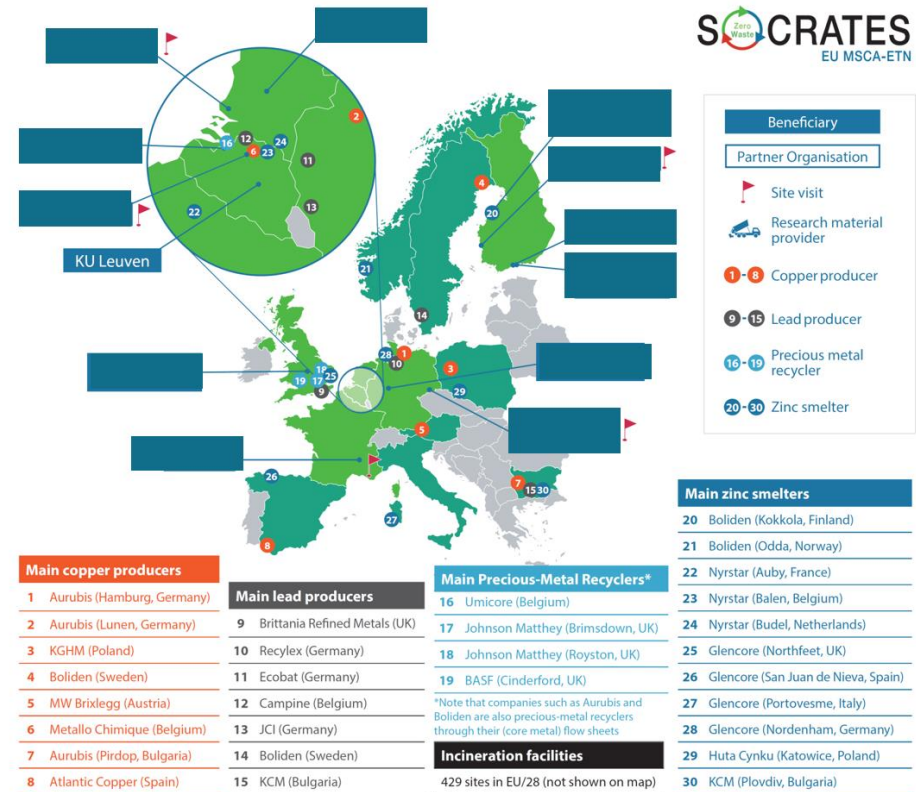
- R&D and CSA projects

Landfills in EU & Critical raw materials recovery?

Mining waste and industrial process residues are ubiquitous

- Tailings, sludges, slags, ashes, drosses etc. have been historically stored in industrial mono-landfills and/or tailing ponds
- High volumes & homogeneous content & privately owned
- Large-scale mining of these landfilled residues is not happening yet

Commercialisation dependent on 4 key parameters: Volume, Performance, Cost, Risk



An example of the EU-wide character of mining waste & industrial process residue production/landfilling

(Source: infographic from MSCA-ETN SOCRATES proposal)

Landfills in EU & Critical raw materials recovery?



Economics can be improved if zero-waste concept is applied:

- Recovery of critical metals (e.g. Sc from red mud) & base metals
- Recovery of mineral matrices for construction applications

Major R&D efforts are required to:

- Develop new metallurgical systems for eco-friendly flow sheets
- Produce outputs with high quality standards at low cost

H2020 Coordination and Support Call?

Adequate policies to promote use of secondary resources (EC COM(2015)614/2)

