Prospecting critical raw materials from wastes

First Urban Mine Knowledge Data Platform providing access to data on mineral resources from extraction to end of life products with the ability to reference all spatial and non-spatial data

The ProSUM project, funded by the European Union (€3.051m) and the Swiss Government (€0.63m), will deliver the First Urban Mine Knowledge Data Platform, a centralised database of all available data and information on arisings, stocks, flows and treatment of waste electrical and electronic equipment (WEEE), end-of-life vehicles (ELVs), batteries and mining waste. The availability of primary and secondary raw materials data, easily accessible in one platform, will provide the foundation for improving Europe’s position on raw material supply, with the ability to accommodate more wastes and resources in future. ProSUM will provide data for improving the management of these wastes and enhancing the resource efficiency of collection, treatment and recycling.

Every year in Europe, around 9 million tonnes of WEEE and 7-8M tonnes and ELVs are generated, and over 1 million tonnes batteries are sold. These products are a rich source of secondary critical raw materials (CRMs) in the urban mine. For example, 99% of world Gallium consumption is in integrated circuits and optoelectronic devices, 74% of Indium in flat panel displays and 27% of cobalt in rechargeable batteries. Previous and active mining deposits also contain untapped reserves of CRMs.

Until now, the data on CRMs has been produced by a variety of institutions including government agencies, universities, NGOs and industry and lies scattered in different databases, formats and reports which is difficult to compare or aggregate.

ProSUM, Latin for ‘I am useful’, and standing for Prospecting Secondary raw materials in the Urban mine and Mining waste, will create an Information Network that allows partners in the network to provide and use data by the creation of an inventory of waste streams with a high potential to serve as a source of CRMs. This ground breaking project will produce the EU Urban Mine Knowledge Data Platform (EU-UMKDP) providing user friendly, seamless access to data and intelligence on mineral resources from extraction to end of life products with the ability to reference all spatial and non-spatial data. The link to primary mineral resources is provided through the existing EU Minerals Knowledge Data Platform. The project will be addressed to a wide range of end-users, including the recycling industry, producers and producer compliance schemes, and policy makers.

All available data will be collated and screened to see if it allows for better characterisation of the material content of these waste and whether better data is required. This will lead to the identification of the need for additional standards and datasets and harmonised methodologies for characterising the CRM content of these waste streams.

On the 23th of April, the ProSUM project will be launched in Brussels.

Pascal Leroy, Secretary General at the WEEE Forum stated “For the first time, it will be possible to access harmonised data on the critical raw materials arising in WEEE, ELVs and batteries. I see this data being of benefit not only to WEEE Producer Compliance Schemes but also to the recycling industry, producers and policy makers alike”.

The first activity of the Network will be to identify how data should be presented and organised for this wide range of stakeholders to ensure it meets their needs. Within the Information Network, Special Interest Groups are also being set up to support the particular data needs of different groups of stakeholders.
Commenting on the need to engage End Users, Jaco Huisman, Scientific Adviser at the United Nations University stressed “it is vitally important to the success of the project that we produce data which the different actors from within industry and across policy makers find useful. We are undertaking this work to help them improve the recycling rates of a greater number of materials from these wastes”.

Organisations wishing to hear more about the project and to join the ProSUM Information Network are being invited to attend the launch event and register at https://www.eventbrite.co.uk/e/prosum-information-network-tickets-15943700036

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