The European Union and Recycling Critical Raw Materials: Stuck in Legal Limbo?

From policy objective to law?

The pressure to advance the green transition is expected to drive an increased demand for metals and minerals. In particular, critical raw materials (CRMs) are growing in significance. Unhindered access to CRMs is a mounting concern due to demand and supply risk. One way to mediate the gap between supply and demand is to create secondary CRM stocks through recycling.

Despite multiple calls in policy documents (see Figure) for improved CRM management and increased recovery since 2008, it remains unclear whether measures geared to this goal have been implemented in the relevant legislative framework. Moreover, the recovery rate of most CRMs is low. The new Batteries Regulation and the proposed CRM Regulation aim to create a more coherence regulatory framework for CRM management.

Regulatory approaches for recycling of CRMs

The legal provisions on the recovery of CRMs reveal a mostly fragmented landscape with limited obligations imposed on operators. There are few legal provisions that target CRMs with salient obligations. For example, the weight-based recovery targets for CRM-rich waste streams such as (WEEE and batteries) have not resulted in efficient recovery of CRMs as they are often incorporated in products in small quantities. Remarkably, the new Batteries Regulation introduces recovery and recovered content targets for single CRMs used in batteries, while the proposed CRM Regulation addresses specific CRM materials in permanent magnets.

The proposed CRM Regulation also seeks to codify definitions of the terms “critical raw material” and “strategic raw material” (SRM), providing a sound foundation for governance and management. Moreover, it sets a benchmark whereby the EU is to produce at least 25% of its annual consumption of SRMs through recovery by 2030. Nevertheless, beyond establishing foundational concepts and procedures the Regulation does not delve deeply into concrete, enforceable obligations and falls short of offering timely solutions for promoting recovery of CRMs.

Need for speed?

The slow development of legal instruments, despite a long-standing awareness of CRM-related challenges, underscores the need for more concrete obligations. The codification of key definitions would be a pivotal step that would pave the way for enacting targeted legal interventions and obligations, ultimately contributing to the enhanced recovery of CRMs within the EU.

What is Urban Symbiosis?

The UrbanSymbiosis (Towards urban symbiosis of critical raw materials: collaborative value creation models in circular ecosystems) research project aims to create sustainable pathways for cities by increasing the circularity of critical raw materials (CRMs).

The project aims for finding efficient and innovative solutions to stem the loss of resources in the future economy. The urban symbiosis -logic is a solution to sustainable resource use and the preservation of CRM’s value during their lifecycle.

Urban symbiosis can offer a possibility to increase the sustainable circularity of CRMs, even though many of the supply chains are global, and a systemic change is needed on a global level. The focus of the project is on three application areas in high-technology products: medical devices, smart buildings and electronic consumer devices.

UrbanSymbiosis is a 4-year (2022-2025) research project, that focuses on creating sustainable pathways for cities by increasing the circularity of critical raw materials. The research consortium partners are VTT Technical Research Centre of Finland, Hanken and Finnish Environment Institute. Grant number: 346916

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