

The Future of Urban Mining

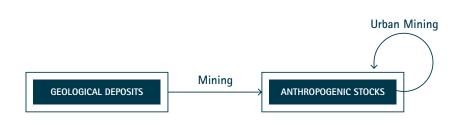
Study Name: The Promise and Limits of Urban Mining

Study Author: Fraunhofer ISI First Presented: November 2020

Urban Mining is a concept that emphasizes the potential of cities, the human habitat and built environment as a source of raw materials supply—with the potential to provide a significant source of future raw materials.

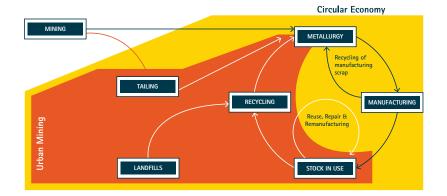
Anthropogenic stock

The research, commissioned by the International Copper Association (ICA) and carried out by Fraunhofer ISI, found Urban Mining secures raw materials by exploring for, extracting and refining anthropogenic resources. For copper, this "anthropogenic stock" comes from resources, including electronic goods, buildings and mine tailings. These metals and minerals still originate from conventional mining, but their use for Urban Mining allows for a degree of independence from natural resources, increasing supply security.



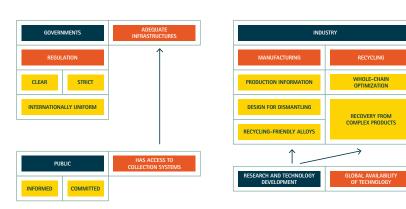
Circular Economy

By recycling end-of-life products and keeping them in the supply chain for longer, the Urban Mine is an important element of the circular economy as the system collects already discarded products and returns the secondary raw materials to the economy. This presents a potential opportunity for the future copper industry, and wider mining, to adopt more sustainable practices. With copper demand predicted to grow globally, treating waste as a resource means Urban Mining is crucial, alongside conventional mining, to meet the increasing demand for raw materials.



Infrastructure

Successfully introducing Urban Mining practices requires engagement and regulation from governments to support adequate infrastructures, alongside an internationally uniform system, and support from an informed and committed public. Significant research and technology development are required to enable the process and mobilize relevant industry groups.



For the full Fraunhofer ISI research on The Promise and Limits of Urban Mining click here.