

DRAM TECHNOLOGY

Mitigation of pollution caused by artisanal and small-scale mining

B2B
B2C
B2G



SEM DRAM technology is a patented natural filtration media manufactured using wastes and by-products from the agricultural and food and drink sectors to remove multiple metals from wastewaters and effluents.

The system can be operated passively under simple gravitational flow making it ideal for remote locations, and is being adapted to the artisanal and small-scale mining (ASM) market to remediate existing environmental pollution and provide better ongoing wastewater treatment for mining operations.

RESTORATION & REMEDIATION

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 28

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Problem

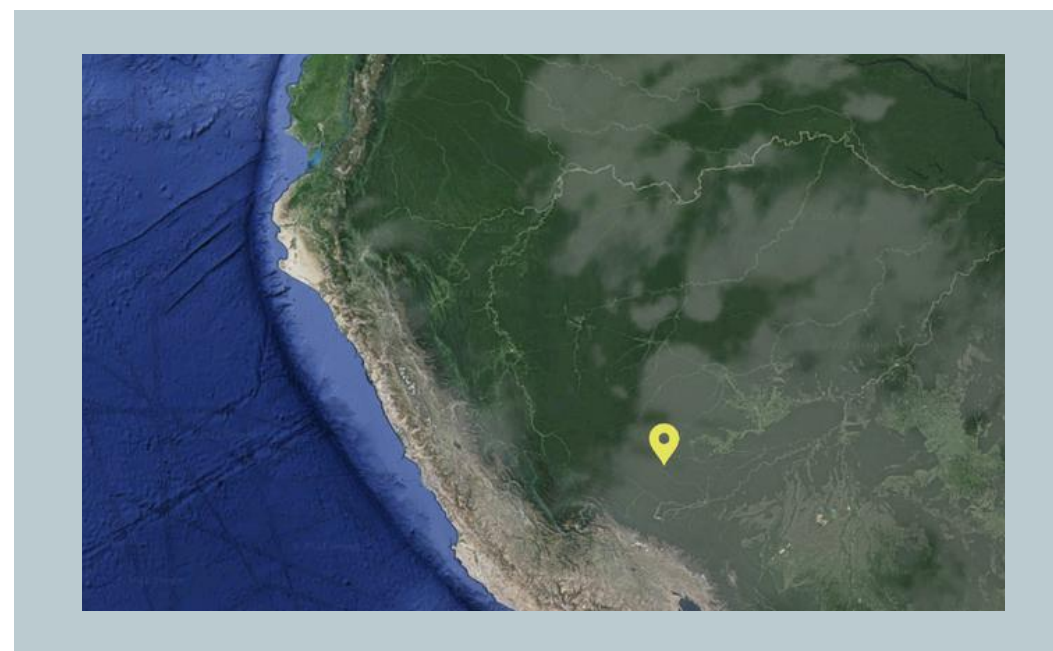
Mining tailings are contaminated with heavy metals and pollutants. ASM mostly occurs in remote areas with limited infrastructure and power, and miners have little incentive to properly manage and remediate tailings, leading to widespread pollution and abandoned effluent ponds.

Solution

SEM DRAM technology is a patented natural filtration media to remove multiple metals from wastewaters and effluents. DRAM can efficiently recover metals without impeding the mining process, which will prevent environmental damage and provide ASM miners with an additional revenue stream.

Market

Governments (local, regional, national), mining companies, local communities, and non-governmental and multilateral organizations seeking restoration solutions and/or to safely close mines.



In partnership with the *CITE Minero* and mining concession *Rosemary 1*, DRAM Technology is being tested in Madre de Dios, Peru using locally-sourced natural filtration media (cassava peels and spent grain from a local brewery) through their participation in the Amazon CoLab.

Competitive Landscape

Current methods of damage limitation for heavy metal water contamination caused by ASM operations are reactionary and consist of making the heavy metals less available instead of capturing them from the contaminated effluents. Remediation efforts have been relatively rare and often conducted by charities or governmental organizations. DRAM offers an economic return to miners with responsible remediation of tailings.

Business Development

SEM is developing a business plan for distribution and sale of the DRAM system in South America. They will further test and refine the solution, seek local manufacturing options, and other distribution, sales, and marketing partners.

Company

SEM develops and implements ground-breaking technology in partnership with visionary business leaders to achieve a zero waste, circular economy.



The Artisanal Mining Grand Challenge: The Amazon is implemented by Conservation X Labs in partnership with the United States Agency for International Development (USAID), the Gordon and Betty Moore Foundation, Microsoft, and Esri. The Challenge seeks to advance innovation solutions that make artisanal and small scale mining more environmentally responsible and socially equitable.

www.artisanalminingchallenge.com

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