



H2020-MSCA-RISE-2018

REMIND: Renewable Energies for Water Treatment and Reuse in Mining Industries

The challenge

South America has a very high level of importance for global metals ore production; in particular, Chile represents the majority of European imports of final copper products since 2012. Also Ecuador is emerging as a mining investment hot spot in Latin America, boosted by a combination of favorable regulatory framework and huge gold and copper reserves. However, South American's mining sector is related to a number of challenges, such as water scarcity, aquifers contamination and related health risks.

REMIND brings together researchers from 8 leading High Education Institutions and Companies located in 4 Countries (Italy, Spain, Chile and Ecuador) with the aim to create a multisectorial and transdisciplinary network to address the challenge of water treatment and reuse in mining activities, the landmark being the use of renewable energies to achieve sustainability through innovation in mining management.

The Project

The overall aim of REMIND is to develop an innovative framework of interplay between Renewable Energy Sources (RES) and innovative Water Treatment Technologies in the logic of a sustainable growth for mining industries. The novel paradigms explored are expected to drastically reduce the environmental impact due to extensive water and energy consumption, and to release of untreated wastewater during the production cycle of copper and gold. The REMIND collaborative network among European Union, Chile and Ecuador is in line with EU policy and strategy for raw materials supply; moreover, this partnership supports the economic and research efforts of Latin American countries towards a more eco-friendly and RES-driven development. The bi-directional knowledge transfer activities implemented in REMIND aim to:

- 1) implement a rational use of water resources in the logic of circular economy;
- 2) promote a carbon-free technological approach (water-energy nexus) for reducing conventional energy resources requirements,
- 3) mitigate health environmental risk in two demonstration sites (mining districts of Antofagasta – CL and Regione de l'Oro – EC),
- 4) exploit the intersectorial cooperation between academia and industry by setting best practices for knowledge transfer in analogous contexts.

REMIND brings together 8 leading High Education Institutions and Large Companies from 4 Countries (Italy, Spain, Chile and Ecuador), and implements a multisectorial and transdisciplinary network that generates 64 secondments and 73 Knowledge Transfer Activities.

Partners

Unical – Università della Calabria (Coordinator); **POLITO** – Politecnico di Torino (DIATI); **USE** - Universidad de Sevilla; **RINA-C** – Rina Consulting S.p.A. (technical partners.); ABB Chile (technical partners); Càmara de Comercio Italiana de Chile A.G. (technical partners); Escuela Superior Politécnica de Chimborazo; UNIVERSIDAD ADOLFO IBÁÑEZ



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Join us on project website! (*Under construction*)