

Reducing disease and death from Artisanal and Small Scale Mining (ASM) the urgent need for responsible mining in the context of growing global demand for minerals and metals for climate change mitigation

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Abstract

Artisanal and small-scale mining (ASM) takes place under extreme conditions with a lack of occupational health and safety. As the demand for metals is increasing due in part to their extensive use in 'green technologies' for climate change mitigation, the negative environmental and occupational consequences of mining practices are disproportionately felt in low- and middle-income countries. The Collegium Ramazzini statement on ASM presents updated information on its neglected health hazards that include multiple toxic hazards, most notably mercury, lead, cyanide, arsenic, cadmium, and cobalt, as well as physical hazards, most notably airborne dust and noise, and the high risk of infectious diseases. These hazards affect both miners and mining communities as working and living spaces are rarely separated. The impact on children and women is often severe, including hazardous exposures during the child-bearing age and pregnancies, and the risk of child labor. We suggest strategies for the mitigation of these hazards and classify those according to primordial, primary, secondary, and tertiary prevention. Further, we identify knowledge gaps and issue recommendations for international, national, and local governments, metal purchasers, and employers are given. With this statement, the Collegium Ramazzini calls for the extension of efforts to minimize all hazards that confront ASM miners and their families.