

HOW TO REHABILITATE A MINE SITE

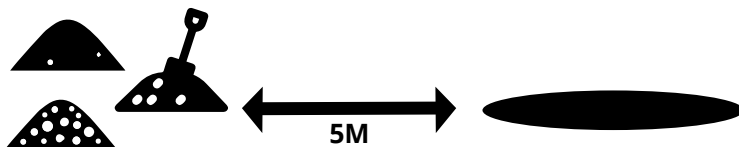


Photo by Sven Torfinn/IMPACT

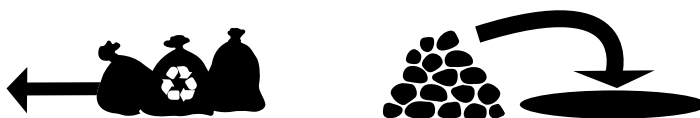
August 2022

IMPACT
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1. SEPARATE THE SOIL: Any soil excavated during mining operations must be separated into **topsoil**, **subsoil**, or **waste rock**. During operations, place them into separate piles, located at least 5 m from the mining shaft to prevent run-off when raining or instability. Protect the topsoil for re-vegetation after mining.



2. CLEAN THE AREA: Rehabilitation must be done after mining operations end. Collect and remove trash. Return any rocks removed from the mining shafts.



3. PREVENTING COLLAPSE: Fill shafts directly with rocks and stones. Fill open pits with waste rock, overburden, and topsoil. If needed, use excavators or other equipment to destroy tunnels and shafts and fill them with rocks and waste from the mining process.



4. TECHNICAL REHABILITATION: After filling shafts, tunnels, and pits, even out the surface by hand or with excavators and bulldozers. The rehabilitated area must be as close to its original dimensions as possible. The final surface of the land should be in line with its planned use.



5. ENHANCE THE SOIL: After technical rehabilitation, the land needs to be covered with subsoil and topsoil. Different types of fertilizers can be used to enhance the quality and health of the topsoil. Organic fertilizers are mainly used for soil nutrition as they easily decompose. Animal manure can be mixed with topsoil.



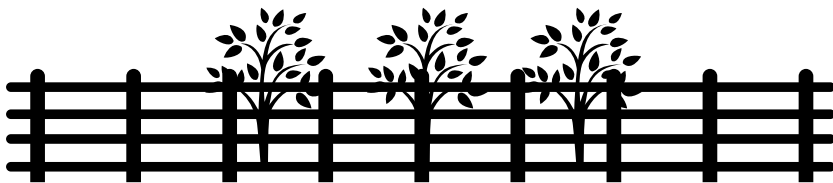
6. PREPARE LAND DEPENDING ON PLANNED USE: Depending on planned use, the land can be backfilled and vegetation planted to make grassland or forest. It can also be used for agricultural purposes, as a lake or water reservoir. Underground tunnels can be used for storage or industrial waste filling.



7. PLANT VEGETATION: It's important to plant trees or grass during the appropriate season.



8. WATER PLANTS: The area prepared for trees and vegetation should have adequate moisture before and during planting. This should follow agroforestry guidelines for different regions in the area as suggested by local authorities and experts.



9. FENCE AND PROTECT REHABILITATED AREAS: When rehabilitation of the land is complete, the area needs to be fenced to protect it from animals for the first two to three years, dependent on how fast vegetation matures. Readily available materials such as timber, welded wire mesh and metal wire can be used for fencing.



10. MAINTAIN THE REHABILITATED LAND: Biologically rehabilitated areas must be maintained for up to three years. Depending on the rain patterns of the area, this could include providing adequate moisture during the dry seasons, fixing fences and, if necessary, the additional application of fertilizers. If 80 percent of the trees and vegetation that have been planted have not survived, a second round of planting needs to be undertaken.

Adapted from the Sustainable Artisanal Mining (SAM) Project, *Responsible Small-Scale Miners' 10 Steps to Protect the Environment*, Swiss Agency for Development and Cooperation SDC, 2015, <https://asmhub.mn/en/files/download/61510>.