

Environment, Local Economy and Closure of the Morila Gold Mine, Mali

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ABSTRACT

The industrial exploitation of gold in Mali raises many challenges, including that of the closure of mines. The objective of this study is to analyze the actions to preserve the environment and revitalize the local economy undertaken as part of the closure of the Morila gold mine located in southern Mali. The methodology adopted consisted of a documentary exploration, the analysis of water quality using a piezometric pump and a pH-meter, the processing of cartographic data through ArcGIS 9.3 as well as field surveys. The results of the study showed that the site of the Morila gold mine is on the one hand, disfigured by the quarry, the deposits of waste rock and ore, the mud yard and on the other hand, made pleasant by the artificial lake with the abundance of vegetation, the animals that live there and the microclimate that reigns there. Analysis of groundwater quality revealed that most of the boreholes around the mud pit and the quarry contain concentrations of heavy metals (sulphate, arsenic, lead) below or slightly above the recommendations of the World Health Organization and the International Finance Corporation. As for surface water, the sulphate level in the Parc à Boue and in the Return Water Dam is worrying, as is the risk of the Return Water Dam overflowing during the rainy season. It also appears that in accordance with the regulatory provisions relating to mining in Mali and the closure plan of the Morila gold mine approved by the government, site rehabilitation operations have been underway since 2010. These revegetation operations of the site consist of leveling, spreading soil and planting plants such as the *Pennisetum pedicellatum* and *Andropogon gayanus*. Also, as part of the closure plan, and to revitalize the local economy, the Randgold Company operating the site has set up an agro-business project including in particular poultry farming, beekeeping, fish farming, production and marketing of fruits and vegetables, eco-tourism. However, obtaining the exploitation permit for the satellite deposits of Ntiola and Viper, which should extend the life of the Morila mine beyond 2020, requires the revision of the closure plan. The correct implementation of the new plan should make it possible to restore the site and bequeath to the neighboring communities a livable, viable and sustainable physical and economic environment.

Keywords: Mining, Environment, Economy, Closure, Morila

