

Artisanal Mining of Gold with Mercury in Ghana

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Abstract

The paper examines the environmental impact of artisanal mining of gold with mercury (Hg) in Ghana. In spite of its positive socio-economic contributions, it is well known that artisanal mining of gold contributes in no small measure to land degradation, loss of biodiversity and natural resources, deforestation, water pollution, etc. In Ghana, these environmental problems remain poorly studied. In the case of Hg pollution, caused by gold extraction using the amalgamation process, total Hg levels in different environmental compartments of the gold-mining-impacted Pra River basin in southwestern Ghana were determined using the latest sampling and analytical techniques. Artisanal gold mining activities in the Pra River basin are on the increase and even though Hg levels determined in water, soil, and sediments were below WHO safe guideline values, the current state of affairs poses a serious environmental threat. However, the majority of the populace, particularly those engaged in gold mining, are unaware of the dangers posed by the use of Hg in mining operations. This paper seeks to draw the attention of Ghanaians (as well as their foreign counterparts) to the need to take up the mantle in changing the general patterns of environmental damage caused by the artisanal gold miners. The need to regularize artisanal gold mining is long overdue. A legal regime for mines of every size, leading to a transformation of the artisanal mining sector into a legal, regulated industry, will help minimize the impact on the environment.