

Name: Michael Leonard II

Category: Primary

Topic: How can gold mining become more sustainable and energy efficient

Gold mining in Guyana contributes greatly to our Gross Domestic Product (GDP), and earns us a lot of money, gold mining can also be defined as the act or process of extracting gold ore. Mining can be very dangerous to us and the environment, especially if not monitored carefully, by causing; air pollution, land pollution, water pollution but very rarely, noise pollution, by the cutting down of trees, chemical waste pouring into lakes and rivers, the hitting together of large machinery, and even with the usage of mercury. Even though gold mining can have negative effects on us all we cannot stop, as it is one of our main economic activities and the one that brings in the most revenue and foreign exchange of any of our resources, but whether it's for gold extraction or even just for a science experiment, mercury is still dangerous and can do us much harm.

There are many ways in which we can make gold mining more sustainable and energy efficient, which just means to maintain at a certain level and to be able to reduce the amount of energy consumption in order to move away from fossil fuels to reduce carbon dioxide, carbon monoxide and methane emissions so to fix this problem mining companies in Guyana should turn to alternative sources of energy such as utilizing small waterfalls to make hydroelectricity, utilizing vast grasslands for wind turbines for hydroelectricity or even by using solar panels, all to power large machinery used in gold mining.

For decades Guyana's miners have been using mercury for gold extraction but what they may not know is that mercury can be dangerous, so to fix this it is suggested that other methods be used for gold extraction, for example, knelson concentrator, a type of gravity concentration apparatus, predominantly used in the gold mining industry. In order to save the wildlife and their habitats and to ensure that there is a livable environment after mining in the lands we must either stop using mercury, or use safer substitutes for mercury.

Gold was formed by meteorites that have bombarded our planet, earth, nearly two hundred million years ago, and over time, this precious metal was formed. Everyone knows that is very dangerous, not only to us, but the environment as well, by eroding the soil, forming sink holes, and much more. Depending on the type of gold mining being done different measures must be put in place in order to sustain a livable environment, for example, if sluicing, a mining technique involving the flooding or trenching of land to expose the raw gold material, is being done, there must be a way for the water to be drained to prevent the land from eroding.

There are other ways of gold mining such as land dredging and water dredging which involve a lot of erosion , but , one thing I would suggest is that the employees of the mining company try doing re-vegetation , which is the planting of trees in an area in which the number of trees has been reduced , due to a fire or deforestation , which is the cutting down of trees in an area, on a large scale.

Gold is not an infinite resource , it will soon end , however , we have to make sure that the process of mining that we do not lose the environment , for what we do not use , we will surely lose.