

Gold mining: Artisans shun borax for mercury's gains

By Edward Kayiwa

Justine Nantumbwe kneels under a tent at the foot of Kayonza hills in Mubende district trying to separate gold from the mud with drops of mercury using two plastic basins.

Mercury is used in most gold mines across the country to sieve gold dust from the soil. After separation, the gold is heated to remove traces of mercury and purified before it is sold.

Nantumbwe says artisan gold miners like mercury because it extracts the gold better than other chemicals such as cyanide.

"A few drops of mercury can get me three times more gold than other chemicals. Like a magnet, mercury attracts almost all the gold particles, isolating worthless dirt from the precious metal," Nantumbwe says, oblivious of the danger it poses.

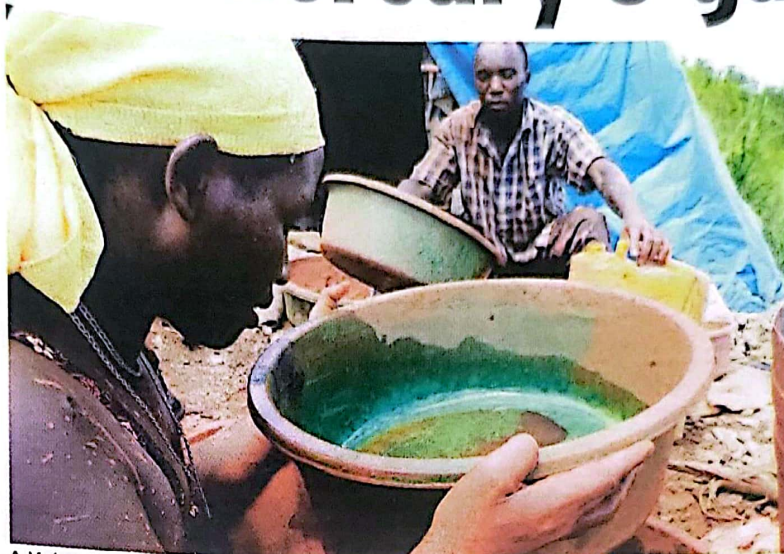
A 2012 United Nations Environment Programme (UNEP) report on artisanal and small scale miners warned that constant use of mercury in gold mining is posing a danger to Uganda's artisanal miners and the communities around.

The report said artisanal and small scale miners are responsible for 37% of all mercury release into the environment every year.

It pointed out that the heaviest users of mercury are miners in Mubende district, Buhweju, Tira in Busia and Rupa in Moroto district, Karamoja sub-region.

Doctors say mercury poses numerous health hazards which include rashes, trembling hands, numbness, tingling in the lips, tongues, fingers and toes. It weakens muscles, impairing movement, affects vision and sometimes leads to blindness in addition to affecting speech.

According to Dr Emmanuel Wikiriza of the International



A Mubende artisan miner extracting gold recently. Mercury poses numerous health hazards

Medical Centre (IMC) Kololo in Kampala, mercury affects the nervous system and has been proven to be particularly debilitating for unborn babies and children. It can cause memory loss, nervous breakdown, hair loss, distorted vision and birth defects such as insufficient brain development in babies.

According to the National Environment Management Authority (NEMA) mercury also weakens soil structures, causing siltation of rivers and soil degradation. NEMA also indicates that about 26,000kg of mercury is imported into Uganda annually and almost half ends up in mines across the country.

Patience Nsereko, an environment monitoring officer at NEMA, says at least 15,000kg of mercury are emitted into the environment annually, 4,500kg of which are discharged into water

bodies. From the environment, it enters the food chain such as fish and animals that drink from contaminated water sources. Humans being at the top of the food chain suffer the consequences of diseases and eventual death.

Eliminating mercury

Nsereko says NEMA is developing chemical management regulations and subsequently legislation to guide mining, including gold and control mercury use.

Joseph Okedi, the assistant commissioner mining in the energy ministry, says the Government and a Canadian NGO have launched a campaign to stop the use of mercury and cyanide in mines. He says the miners should instead adopt borax, a more environment-friendly chemical as proven with Tanzanian and Ghanaian

artisanal miners. Okedi says borax is cheaper and achieves between 70% and 75% gold recovery compared to 30% with mercury. Borax, he says, is a salt that reduces the melting point of minerals, including gold and does not cause cancer, though it can mildly irritate the skin.

Miners' take

A member of with the Mubende Gold Miners Association, who declined to be named, said miners will not easily give up mercury because it is fast acting and gives them quick money.

According to the source, passing a bylaw could be the only way to get artisanal miners to give up mercury use in the gold mines.

The Minamata treaty

In 2013, Uganda joined 140 countries in Minamata, Japan, to sign an international treaty

VOX POPS

Akram Ssenyonga
I have seen strange diseases attack gold miners, but I did not relate them to handling mercury. We protect ourselves using rudimentary means. However, I read that mercury is too dangerous to be handled casually as we do.

Yusuf Murengye
A year ago, a friend started losing hair and we thought he was just becoming bald. Later, he started trembling all over and had difficulty in breathing. At Mubende Hospital, he was told this was due to mercury exposure. I know it is dangerous, but I would rather fall sick trying to get to my dream than give up for fear of falling sick.

Moses Akandonda
There are strange diseases that some times kill people, but we do not know if it is caused by handling mercury. The day medical doctors prove it is mercury, I will quit and look for alternative jobs.

that would protect human health and the environment from greenhouse gas emissions and the release of mercury and mercury compounds, through banning the use of mercury in mining, tooth extraction and cosmetics and beauty products.

The bylaw was expected to be effected in October that year after 50% countries had signed the agreement, but Uganda has not yet ratified it.