

# 2024

## A year of partnerships, innovation and inclusion

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**Cover photo:** A truck loading marbel at a site in Nanyidik in Rupa Sub county.

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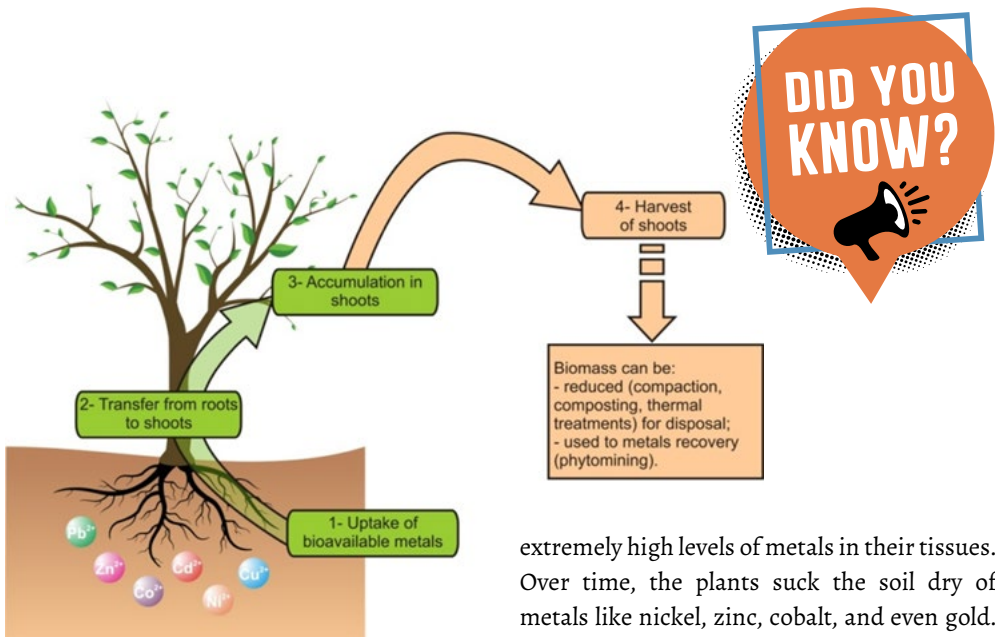


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**Extracting Sustainability**

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## Phytomining

Phytomining is the science of producing metal by growing plants. Of the 320,000 recognized plant species, only around 700 are so-called “hyperaccumulators.” A hyperaccumulator is a plant capable of growing in soil or water with high concentrations of metals, absorbing these metals through their roots, and concentrating

extremely high levels of metals in their tissues. Over time, the plants suck the soil dry of metals like nickel, zinc, cobalt, and even gold. The plants are then harvested and the metal extracted.

In Malaysia’s Kinabalu Park, you’ll find four acres of a leafy-green shrub, tended to since 2015 by local villagers. Once or twice per year, they shave off about a foot of growth from the 20-foot-tall plants. Then, they burn that crop to produce an ashy “bio-ore” that is up to 25 percent nickel by weight. ■

(Source: Grist Science)

# Make Mining Great Again: Towards a Sustainable and Efficient Industry

*To revitalize the mining industry, we must prioritise sustainable practices that effectively reduce ecological footprints, protect human rights, and enhance operational efficiency.*

BY JOSHUA RUKUNDO

**M**ining plays a pivotal role in driving economic development and ensuring the availability of vital resources. However, it also presents substantial environmental and social challenges, key of which include mining's significant contribution to global greenhouse gas emissions, water, air and soil pollution with mercury and mercury-contaminated tailings, child labour, hazardous working conditions, and others.

To revitalize the mining industry, we must prioritise sustainable practices that effectively reduce ecological footprints, protect human rights, and enhance operational efficiency.



Sustainable mining practices benefit the environment and contribute to the overall social and economic development of mining communities. By prioritising the health and safety of workers, mining entities can create a positive work environment and improve the well-being of their employees.

Additionally, investing in community development programs and infrastructure projects can enhance the quality of life for communities.

Mining companies can build trust and foster positive stakeholder relationships by engaging in transparent and inclusive decision-making processes. This collaborative approach ensures that the benefits of mining are shared equitably and that the industry can thrive responsibly and sustainably.

Ensuring respect for human rights is paramount to creating a responsible mining industry. Transparent dialogue and consultation processes entail proper engagement with local communities, indigenous peoples, and labour organizations.

Close attention should be given to securing fair wages, decent working conditions and health and safety standards for all mine workers. Empowering affected communities through capacity-building initiatives and revenue-sharing schemes can enhance socio-economic development and alleviate poverty, contributing to the overall success of the mining sector.

Mining companies must adopt innovative approaches that optimise operations, increase productivity, and reduce costs to enhance efficiency. Integrating automated systems and data analytics into mining processes can improve safety, precision, as well as risk and resource management.

Furthermore, embracing a circular economy model by encouraging recycling and exploring novel extraction methods minimises waste and maximises resource recovery. By optimising energy consumption, companies can reduce costs and environmental impacts.

Collaboration among various stakeholders is crucial for successfully revitalising the mining industry. Governments should create an enabling environment by developing and enforcing robust regulations, providing incentives for sustainable practices and ensuring effective oversight.

Investment in research and development, as well as education and training programs

will promote the adoption of innovative technologies and specialised skillsets. Encouraging partnerships between mining companies, research institutions, and local communities can foster knowledge exchange and co-create sustainable mining solutions.

Transparency and accountability should be central to the renewed mining industry. Companies must disclose their environmental and social performance through regular reporting, allowing for external scrutiny and the integration of stakeholder feedback.

Independent auditing and certification systems should also be implemented to validate compliance with industry standards and hold mining enterprises accountable. Engaging with civil society organisations, NGOs, and academia can facilitate the development of responsible mining practices through exchanging knowledge and best practices.

By prioritising sustainable practices, promoting human rights, improving efficiency, fostering collaboration, and enhancing transparency, the mining industry can indeed be revitalized and regain its status as a responsible contributor to society.

Gradual implementation of the strategies discussed will require collective effort from various stakeholders, including governments, mining companies, researchers, and local communities. Only through a comprehensive and informed approach - one that supports economic growth while ensuring our planet's and its inhabitants' well-being, can we truly make mining great again. ■

***Mr. Rukundo is the Senior Project Officer in Uganda, Solidaridad East and Central Africa.***

# Pilot biometric registration of gold miners complete

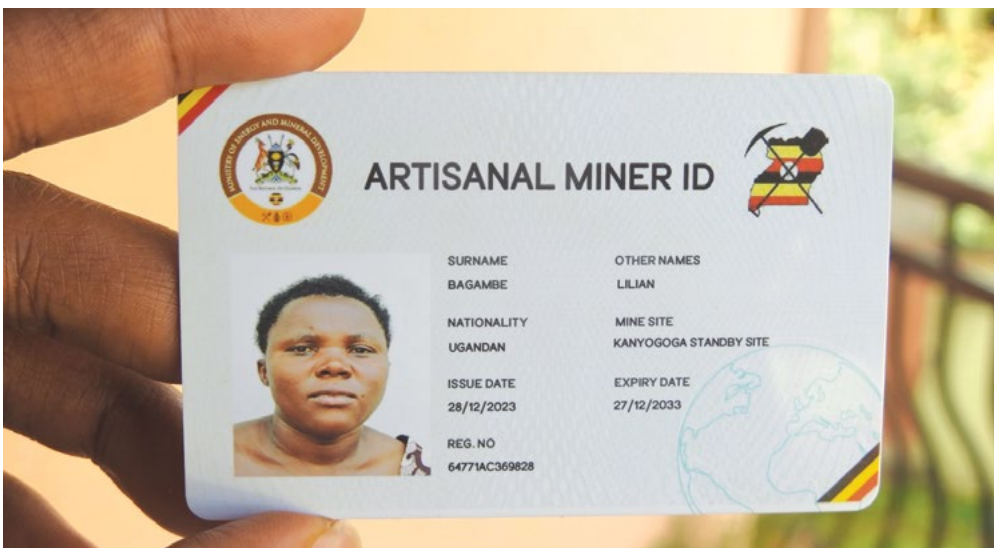
The first phase of the Biometric Registration of Artisanal and Small-scale Miners (BRASM) has been completed. This pilot phase was conducted in the gold mining areas of Busia, Namayingo, Buhweju and Kassanda Districts and covered the miners as well as all other actors along the gold value chain.

BRASM involves the collection of biometric information like an image of the face and fingerprints, as well as other details including the name, age, sex, location, mineral type and affiliation, among others.

The data is captured through a biometric registration software solution and stored

in a secure central database hosted at the National Information Technology Authority-Uganda (NITA-U) and managed by the Directorate of Geological Survey and Mines (DGSM). Registered people will be issued with identity cards.

Following the completion of the pilot phase, DGSM is continuing registration across all other mining areas in Uganda, including those engaged in extraction of Development Minerals or Building Substances. Miners are required to have national identity cards or their National Identity Numbers (NINs) in order to be registered. However, the pilot registration phase registered even those people without national IDs given that they were a significant number. ■



*An identity card of a miner in Kanyogoga, Kassanda District.*





An ASM site for stone aggregate in Laroo, Gulu City.

# Government outs Draft Building Substances Bill

*The Draft Bill seeks to regulate and license the commercial extraction of building substances, including sand, murram, aggregate stone and clay, as defined in the Mining and Minerals Act 2022.*

BY ROBERT MWESIGYE

**T**he Bill comes as a result of Parliament's recommendation that the regulation of the extraction of these materials should not be lumped together with the Mining and Minerals Act that was passed into law in October 2022 by the President.

Parliamentarians argued that building substances are a source of livelihood for millions of Ugandans and treating them like precious metals by law would disadvantage them and diminish their earnings.

A UNDP 2018 baseline study of the sector estimates over 1 million Ugandans benefit directly from the sector, whose workforce is

almost entirely dominated by Artisanal and Small Scale Miners (ASMs).

The new legislation, according to the Commissioner of Mines at the Directorate of Geological Survey and Mines (DGSM), Agnes Alaba, is in line with Uganda's Mineral Development Programme as enshrined in the National Development Plan III which prioritises five strategic minerals for value addition. These include gold, Iron ore, Development Minerals (including building substances), copper and phosphates for production of fertilisers to boost agricultural production.

During a consultative engagement with stakeholders, Ms. Alaba said that the Bill is

also meant to align with the already existing legal framework that governs the mining sector.

The Bill is treated under Article 244; Clauses 5 and 6 that vest authority in the Government, through the Ministry of Energy and Mineral Development, to regulate and license the commercial extraction of building substances.

The Bill provides for four categories of quarrying licenses ranging from artisanal, to small scale, medium scale and large scale. In its draft form, the Bill provides for deterrent penalties that include a five-year jail sentence and/or a fine of 20,000) currency points (UGX 200 million) for illegal or unlicensed quarrying.

Notably, quarry license holders will be required to carry out Environmental and Social Impact Assessments (ESIAs) for their projects; but ASMs will not be required to have this certificate on application for a license, unlike the large scale operators.

The measures are intended to restore sanity to the environment and put in place much-needed health and safety safeguards.



Bill riles Local Governments over licensing, taxes

Local Government Officials, however, have expressed dissatisfaction over a Clause in the Building Substances Bill that vests licensing powers in the Minister.

They argue that once again, they have been left to do the donkey work of monitoring compliance by license holders while running very meagre budgets that cannot sustain them.

**This move further disempowers us as Local Government and kills the spirit of decentralisation. The Bill in its original form had given us licensing powers but now we have no authority.**

Initially, when the Bill was first presented to Parliament in 2021, the Clause on Building Substances empowered Local Governments to license quarry operators. However, the new draft now vests that authority in the responsible line Minister.

Likewise, the Bill vests the authority to collect any fees and taxes from operators in the Uganda Revenue Authority.

Officials from several District Local Governments have cited this as a measure to deny them a crucial avenue for revenue generation to support service provision in other sectors.

“This move further disempowers us as Local Government and kills the spirit of decentralisation. The Bill in its original form had given us licensing powers but now we have no authority,” William Mujuni, the Natural Resources Officer of Mukono noted.

The Legal Officer at DGSM however allayed their fears clarifying that in the Clause, among the roles of the Local Governments, is to perform any other duties as the Minister may delegate to them as designated officers, who, in this case, could be officials of the Local Government. ■

Courtesy photo / PLEXII





# District Officials speak out on Draft Building Substances Bill



**Francesca Atoo Kitembo - DNRO Gulu**

*"I am already seeing some gaps like the restoration of the environment or the degraded ecosystem. I also did not hear anything concerning social safeguards. How do we protect these miners at the quarry sites? For example, in my district, at the quarry sites there are even no latrines. People ease themselves in the water bodies which is a source of our domestic water. Issues of social safeguards and sanitation should be taken care of.*

*Another gap is when it comes to the land, take for example, extraction of murram - things are not very clear in the draft law. How should the owner of that land be compensated? As it is, it depends on your bargaining power. If you are able to convince the villager, you only give some little money which somebody cannot even use to acquire a piece of land elsewhere.*

*The other thing is the relationship between the mining sector and the Tourism Ministry. Sometimes the Ministry licenses places that harbour tourism sites. I have seen an example of the Baker's Fort in Patiko which is in Gulu. To the Alurs, those are cultural areas so when licenses are given in these areas the developers will find it hard to operate because the community will not allow them to extract the mineral. The only way this can be avoided is if the people on ground, the Local Government, are consulted when issuing these licenses.*

**Mugenyi Cyril – DNRO Bushenyi**

*This new law is going to help a lot because this industry of Development Minerals has been unregulated. Now with the new law, we shall be able to license and delicense those who do not comply and also Government will be able to get revenue from these mining associations.*



**Rebecca Ssabaganzi – DNRO Wakiso**

This Bill is reducing another revenue generating source for the Local Governments. We have been putting road tolls to get some revenues to help us continue to deliver services to the local communities including the ASMs. Now with the licensing going to the Ministry, even that has to close if I have understood it well. Otherwise, it is going to be double taxation in the mines as well as on the road. The bigger problem is that Local Governments have had an escalation – a multiplier effect – of Councillors who demand a lot of money. As a result, the local revenues that we are supposed to depend on are increasingly reducing.

We are going to be more demoralized. The UNDP Development Minerals Project had brought some sanity that even dimension stones business was organised. Now they are going to be licensed and some people are going to fall out because they don't have the capacity to put together the required documentation.

The Bill is so delinked from the Local Governments. That needs to be looked into. From that UNDP baseline study of 2018, I had 150 quarry sites in Wakiso. If they are all supposed to come to the Ministry and I am supposed to supervise, manage and engage in conflict resolution, it is a nightmare. When you look at the clay sites which are about 80 as well, then 120 of sand and they all have to go to the Ministry, that is not realistic.



**Wasswa Ssempijja, District Commercial Officer, Masaka**

*The spirit of decentralization is dying. If we are not careful the DNROs will turn out like the Forestry Officials. The Masaka – Mbarara corridor used to be heavily forested but that is no more. National Forestry Authority (NFA) officials now are like brokers if you have money you can cut all the trees you want. I am afraid the Natural Resources Officers will turn out the same because this law is disempowering them.*



**Ociti Godfrey Odoki, District Commercial Officer, Nwoya**

*In my District, a Chinese company called Zong Mie and another Indian company called Ambitious Company Uganda Ltd are blasting rocks. These are supplying aggregate for the Karuma – Arua road works. But the legal position on the extraction of these materials is very weak because they are not regulated.*

*Right now, one the companies wants to start on a new site but we are first insisting on a Memorandum of Understanding (MoU) in order for the district to benefit. We are looking at economic value and also the health and safety of the community during the blasting. I am opportunistic that the new law will guide us on this matter. ■*





# Moroto artisanal marble miners to get mining license

*RUCODET scores big win for Rupa mining community following negotiations with mining companies*

BY ROBERT MWESIGYE

**M**arble artisanal and small-scale miners operating in Nanyidik village in Rupa Sub-County will soon obtain a mining permit to secure their mining rights.

This development comes as a result of protracted negotiations between the miners and two of the mining companies operating in the area, namely; Sunbelt Group of Companies and Sunbird Resources.

The negotiations stem from community agreements between the miners, their representative Rupa Community

Development Trust (RUCODET) and the two Chinese mining companies.

RUCODET is a community organization that was formed in 2017 to protect land and secure surface rights for the community in Karamoja. Soon after inception, the Trust negotiated and received over two billion shillings for surface rights on behalf of the community.

The Trust's lawyer, Geoffrey Ojok, explains that engaging and negotiating with investors for the benefit of the community is one of RUCODET's core mandates. Under the Trust, the community has successfully negotiated with three mining companies




A heap of marble at an ASM site in Rupa Sub County, Moroto District



**A truck loading marbel at a site in Nanyidik in Rupa Sub county.**

for surface rights. “The Trust was created with the main objective of taking custody of all communal land in Rupa Sub-County for and on behalf of the community, negotiate or transact with investors who desire to acquire surface rights from the community and receive payments from the investors for and on behalf of the community,” Ojok told this publication. “The Trust also equitably distributes or shares the said money in accordance to the agreed distribution channels to the directly and indirectly affected persons and the entire Rupa community known as the beneficiaries,” he added.

The move to apply for a mining license is expected to reduce incidents of conflict between the locals and the mining


  
**The Trust was created with the main objective of taking custody of all communal land in Rupa Sub-County for and on behalf of the community, negotiate or transact with investors who desire to acquire surface rights from the community and receive payments from the investors for and on behalf of the community.**

companies over mining areas. “Recently, Sunbelt was sending them away to work somewhere where the rocks are beyond three meters deep. I intervened because the miners use rudimentary tools to operate and at that depth it gets really hard working the rocks,” Gerald Emeku, the DGSM Regional Inspector of Mines for the Karamoja Region told this publication.

The new Mining and Minerals Act 2022 provides for community development agreements between mineral host communities and mineral rights holders to enhance local community development and welfare. The Act also empowers communities to negotiate beneficial and sustainable surface rights terms. ■



# Woodcross Resources: Uganda's first integrated Tin mining and refining company

*The company will be exporting a certified ready-to-use product to the international market after securing an export license from Government. In an interview with PLEXII's **Mwesigye Robert**, Woodcross Managing Director, **Omid Arabameri**, shares some insights about their operations and the potential of Uganda as a mining investment destination.*



**Q** *The Tin smelting project in Mbarara is certainly the first of its kind here. Please briefly describe for us what sort of establishment it is and share a profile of Wood Cross.*

Our holding company is Woodcross Resources. It operates Woodcross Mining which undertakes all of our mining operations and holds our mining licenses. The other is Woodcross Smelting which hosts our refining operations in Mbarara. We are the first and only integrated Tin mining and refining company in Uganda.

I am sure you are aware of the ongoing legislation in Uganda that prohibits the export of unprocessed ores and minerals. As it relates to Tin, we are the only company that can legally export Tin out of Uganda, given that we have implemented value addition to the Tin.

Our operation in Mbarara includes a commercial scale Tin smelting facility which can produce roughly 100 tonnes per month of LME (London Metal Exchange) grade Tin ingots.

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**Q** *Describe what kind of equipment is at the facility and the processes that will be taking place.*

The refining operations roughly involve two processes: The reduction process initially includes running material in an electric arc furnace at about 1200 degrees in order to de-oxidize the Cassiterite. The second stage is the refining process which removes any final impurities from the crude Tin produced in the reduction process. We are using a liquidation oven and Tin kettle to complete the second process.

**Q** *Who is buying your product and could you comment generally on the market?*

We are in discussion with a number of offtake partners who are interested in buying our product. These are large, well established recognized traders in the metals and mining space. There is plenty of appetite for refined Tin from Uganda. The Tin market has very promising long-term supply and demand fundamentals. There are a lot of investors and end users looking for new sources of supply from various parts of the world. As you might know, most of the Tin in the world comes from China and Eastern Asia and given ongoing geopolitical conflicts between the US and China, there is a lot of interest from Western buyers to secure critical minerals from new supply centres. Uganda is well positioned to benefit from some of that excess demand in the next coming years.

As I mentioned, there is plenty of demand for refined Tin out of Uganda; we have already seen that from many different buyers. The demand is coming both from the traditional Western metals dealers and we also have buyers from the Eastern block interested in our product.

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**Q** *You earlier mentioned something about artisanal miners. Do you have frameworks in place to support these ASMs? As you know there are many operating in Ntugamo.*

Our mineral sourcing strategy is largely predicated around cooperating with ASMs, there are lots of different initiatives that we have with the local artisanal mining community.

We have various programmes and initiatives where we provide ASMs with equipment that makes their working environment more productive, we introduce health and safety procedures, as well as infrastructure that allows them to work more efficiently. We do a lot of community outreach programmes, we have also developed schools in the Ntugamo area and established new sources for fresh drinking water.

We have already been working with the miners on our licenses and have provided them with some equipment and resources. We are waiting to obtain our licenses for exporting refined Tin out of Uganda so that we can really scale up our investments in the mining side of our business.

**Q** *Could you please elaborate more on how you are working with ASMs?*

We have our own mining licenses and only source material from our own mining

licenses. We have one mining license in Ruhaama, Ntugamo District and another in Kikagati, Isingiro District, which was previously owned by a company called African Panther Resources. Woodcross acquired that company recently in order to consolidate. The miners work on those licenses and we have a designated mine site manager who organises the miners and we provide them with equipment and health and safety procedures. The mine managers essentially purchase and consolidate materials and then sell onwards to Woodcross' smelting facility in Mbarara.

We only source materials from our own licenses because of mineral traceability requirements by regulators in the region and internationally that require that you provide very transparent means of where your materials come from. So for us, it is very easy to do that because all the material that is fed into our smelter comes from Woodcross' mining licenses or third party sites that have undergone due diligence.



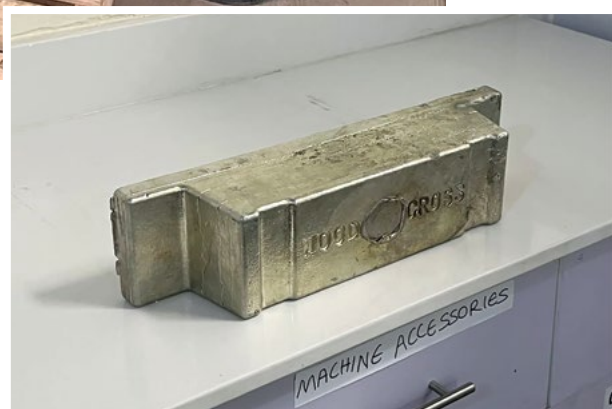
*Workers operate the incinerator at the Woodcross Tin smelter in Mbarara.*



**A staff labels the Tin ingots.**

**Q** *You actually pre-empted my next question about traceability. Of course, you are aware of the nature of minerals you are dealing in and the accusations against Uganda regarding smuggling gold into our supply chains. Are you certain your traceability mechanisms are airtight?*

That is correct. We have our own internal control processes that track materials that specifically come from our own mining licenses and we carry out wide inspections to essentially quantify realistically how much material should essentially be coming out of a mining licenses depending on the phase of the development. We also track daily/monthly production and really pay attention to those deviations. Areas where there is too much material for the level of development of the licenses are those that we focus on to make sure that all the material is being sourced from our own licenses.



**The final product ready for export**

**Q** *Does your facility in any way work with the Government Beneficiation Centre in Ntungamo?*

From our understanding that Mineral Beneficiation Centre that the Ministry has built is currently vacant and it is not active. They have completed the construction work and it is a beautiful facility. I recommend those who are interested in the space to visit; the Ministry has done a fantastic job developing that facility. But as it stands, our operations are not in any way related to that facility. All of the work is being completed on our own premises.



**Q** *There is a current debate among sector stakeholders regarding value addition of Uganda's minerals. What is your view?*

The Government and the companies (private sector) really need to sit down and engage in a commercial and technical discussion across different minerals. Every mineral has its own market and its own metallurgical, geological and mineral processing characteristics. Therefore, the prescription for each mineral is different and a one-size-fits-all solution will not work for different minerals.

Obviously, the private sector is motivated by generating profit for the shareholder while the Ministry and the country want to develop the mining sector. Uganda is a virgin mining territory which means there is plenty of potential in developing projects and adding value to the economy.

If both sides can engage around the parameters and objectives through having sensible information sharing exchanges, then the State can achieve its objectives of value addition while the private sector invests money into projects that are commercially feasible.



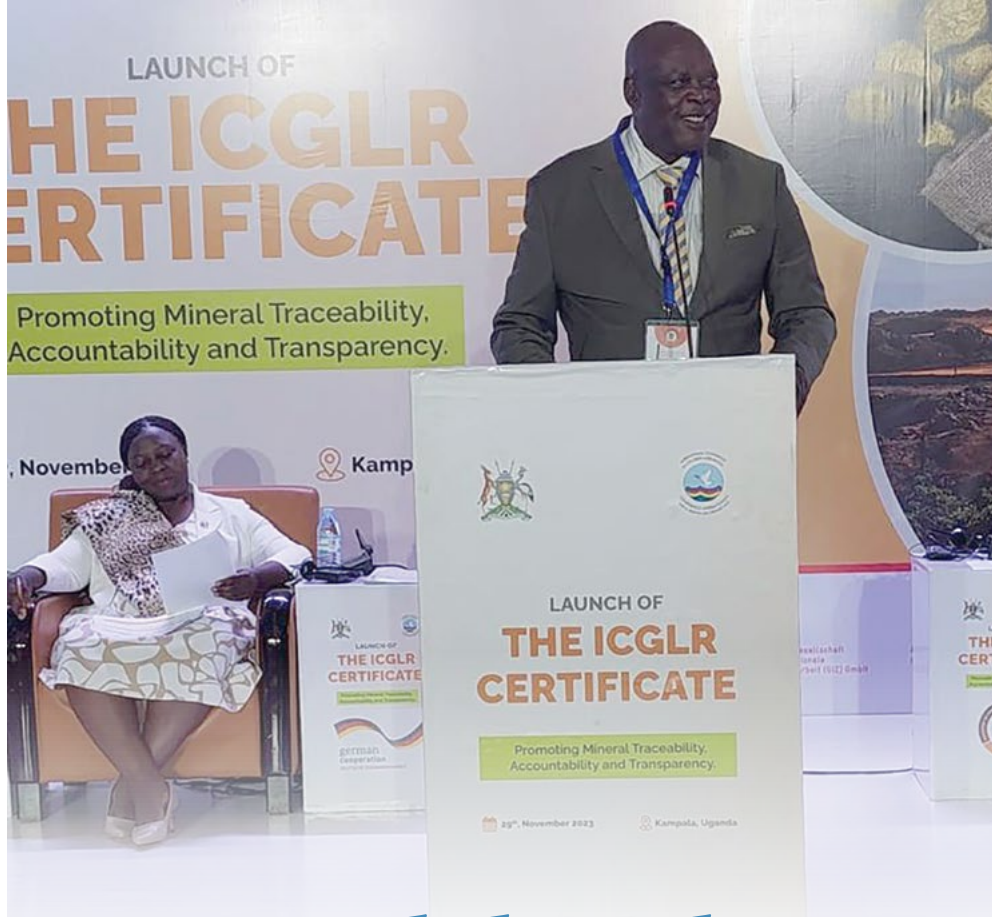
**Workers empty bags of cassiterite.**

**Q** *What recommendations might you have for different sector stakeholders in terms of policy direction, regulatory or whatever to drive the industry forward in Uganda?*

There is a need to complete feasible technical studies for each mineral and its characteristics. For example, when it comes to Tin, the mineral processing and metallurgical characteristics of Tin is simple enough. In layman terms, that allows you to arrive at a highly refined product which is essentially what we have done. We have been able to take Tin concentrate from Uganda that is roughly about 65% grade and refine it to 99.85% via a very cost-effective and efficient process. If you look at Tantalum for example or (Coltan ore) you have a very different commercial market and technical characteristics, so more considerations are required with regards to legislating export criteria for Tantalum in our view. ■



**Cassiterite being melted.**



# Uganda launches certificate to track export of designated conflict minerals

*The certificate is a valuable tool for promoting transparency, accountability and sustainable development of the mining sector*

BY ROBERT MWESIGYE

Uganda will now export only certified designated conflict minerals following the launch of the International Conference of the Great Lakes Region (ICGLR) Certificate.

The development is the culmination of seventeen years of dedicated work when Uganda committed to the Great Lakes States Pact on Security, Stability and Development of the Great Lakes region.

At the launch of the certificate in Kampala in

November 2022, the Executive Secretary of the IGCLR, Ambassador João Samuel Caholo, noted that the certificate was put in place as part of the implementation of the Protocol Against the Illegal Exploitation of Natural Resources, one of the Protocols of the Pact on Security, Stability and Development of the Great Lakes region.

The goal of the Certificate is to ensure that minerals exported from the region do not contribute to armed conflict or degradation of human rights.

“It is a foolproof document issued by member states and governed by Appendix C of the Regional Certification Mechanism Manual of the ICGLR. It identifies a shipment of designated minerals as being in conformity with the requirements of the Regional Certification Mechanism,” explained Ambassador Caholo.



**Commissioner of Mines Agnes Alaba delivers remarks at the launch.**

### **Triple benefit**

Amb. Caholo noted that the certificate has a triple benefit to the member state, the investor and the region as it allows to identify all stakeholders along the supply chain.

Irene Batebe, the Permanent Secretary Ministry of Energy and Mineral Development, dismissed claims that the certificate will complicate processes for mineral dealers. “Certification goes beyond benefitting the country to support investors and the business community to safeguard their businesses, gain a competitive edge and contribute to a more sustainable vision of metal and mineral sourcing,” she told delegates at the launch event.

Ms. Batebe said that Uganda has already demonstrated commitment to implement the ICGLR Certificate by including it in the legal and regulatory framework. The Mining Regulations of 2023 also support the implementation of the certificate.

Uganda becomes the fifth member state to implement the certificate after Rwanda, Tanzania, Burundi and the DRC. ■

# Concern as mercury floods gold mines in Karamoja

*The use of mercury in mining operations was outlawed in the Mining and Minerals Act 2022*

BY ROBERT MWESIGYE

**M**iners in the Karamoja sub-region are reporting an increase in the use of mercury in the gold mines.

A miner who only allowed to speak to this publication anonymously said that the increase of mercury in the region could be attributed to the influx of artisanal miners from Kassanda, Mubende and Busia Districts, who have been increasingly moving into the Region in search of new mining areas.

According to the source, mercury can be easily bought off the streets of Moroto.

“Right now, as we speak, there is a shop in Moroto town that sells mercury at three thousand shillings per gramme,” the source said.

This publication has received reports from Okuda village in Chamkok Sub-County of Abim District that a “milky” chemical, suspected to be mercury, is slowly being introduced in gold mining operations there. According to a source, gold buyers “have brought chemicals to be used for easy processing of gold in basins during purification.” The source adds that the chemical attracts gold so easily but the people using it are complaining of a burning

Burning of amalgam leaves behind residues of mercury in the air, exposing miners to deadly fumes.



Courtesy photo / PLEXII





**A miner holds amalgam before burning it.**

sensation on their skins, skin rashes and in some cases, wounds.

Mercury use in Karamoja was previously rare as mining in the region was predominantly for the locals who had no access to mercury. However, as numbers of artisanal and small-scale miners operating in the sector grow and government makes strides to formalise the sector with new legislation, some miners are opting to move to remote areas where they can operate with limited oversight by Government.

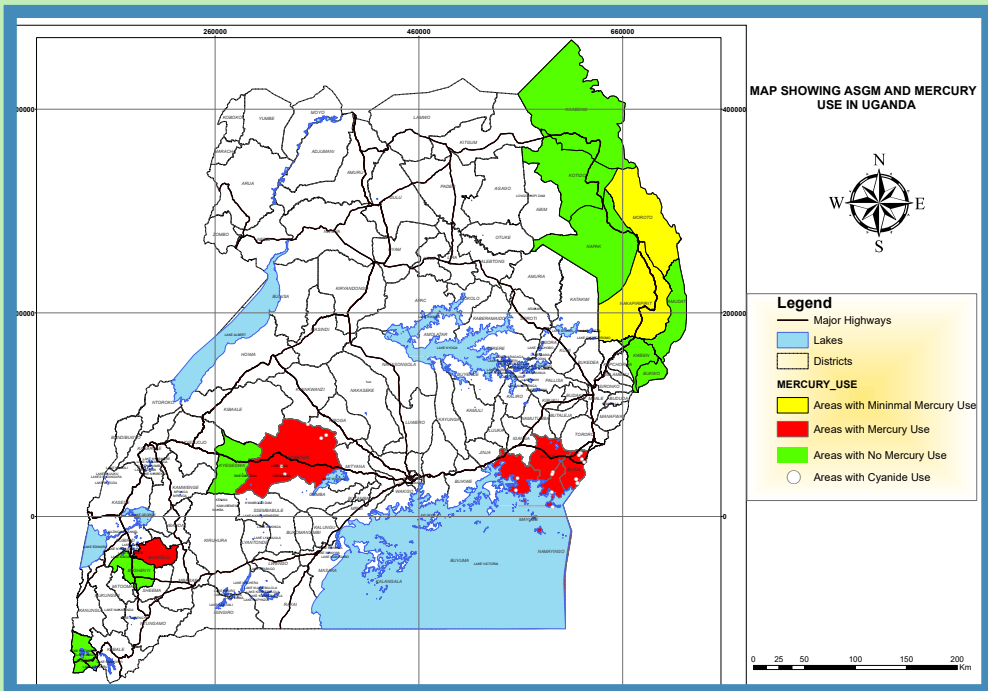
The source also noted that the biggest concern is that many of the local miners do not know how to protect themselves, lack the means to, or are even oblivious of the dangers mercury poses to their health.

DGSM's Karamoja Region Mining Inspector, Gerald Eneku, told this publication that he has been working with Civil Society partners to sensitise miners on the dangers of mercury, but more work needs to be done. "The miners from Kampala who know the dangers of mercury carry their own drinking

water while the locals here consume water from the river that is at times contaminated with mercury," he said. "The women miners are always the most vulnerable as they do most of the panning."

Asked about the selling of mercury in Moroto town, Mr. Eneku said he wouldn't be surprised though it might be under the radar. "One time I coordinated with members of Civil Society and police to arrest an Indian in Karita who was selling mercury, but he was tipped off and fled before we got to him," recalled Eneku.

The Mining and Minerals Act 2022 sets a steep penalty for persons found using mercury in their mining operations. Subsection (1) of Clause 255, sets a hefty fine of five thousand currency points, equivalent to 100 million shillings, or imprisonment of three years, or even both. The law also directs that use of cyanide in mining operations must be authorised by the Government. Miners who use cyanide without that authorisation risk the same penalty. ■



Source: NEMA 2018

# A snapshot of mercury use in gold mining

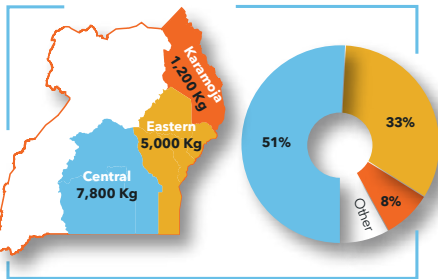
In 2018, the National Environment Management Authority (NEMA) and ACEMP carried out a country-wide study which established that mercury hotspots were concentrated within the Eastern districts of Busia and Namayingo; the Central Region districts of Kassanda and Mubende; and the Western Region district of Buhweju. In the Karamoja region, the mercury hotspots were only in Moroto, Amudat and Nakapiripirit Districts while Kigezi region was found to be mercury free.

That study also established that over 15,000 Kg of mercury were used per year by Artisanal and Small-scale Gold Miners (ASGMs) in Uganda. At the time, Central Region was responsible for the highest amount of all mercury in gold production with over 7,800 Kg Hg/y (51%); followed by the Eastern Region with over 5,000 Kg Hg/y (33%) and the Karamoja Region with only 1,200 Kg Hg/y (8%).

# DANGERS OF MERCURY IN MINING

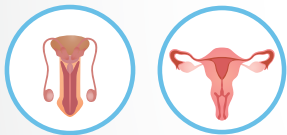


In Uganda, over **15,000 Kg** of mercury are used by 73% of artisanal and small-scale miners in their gold operations every year. Central Region uses the highest amount of mercury, over **7,800 Kg** per year (51%); followed by the Eastern Region with over **5,000 Kg** (33%) and the Karamoja Region with over **1,200 Kg** (8%).



**The rampant use of mercury** in gold mining operations exposes the workforce to serious risk of mercury poisoning which can have devastating health impacts on human eyes, skin, liver, lung, kidneys, heart, brain and central nervous system. Infants and young children are more vulnerable to mercury poisoning than adults.

This **ILLUSTRATION** shows how mercury poisoning can affect the health of miners and people near mining areas who may inhale mercury (through gold processing activities) or ingest it (by eating fish).

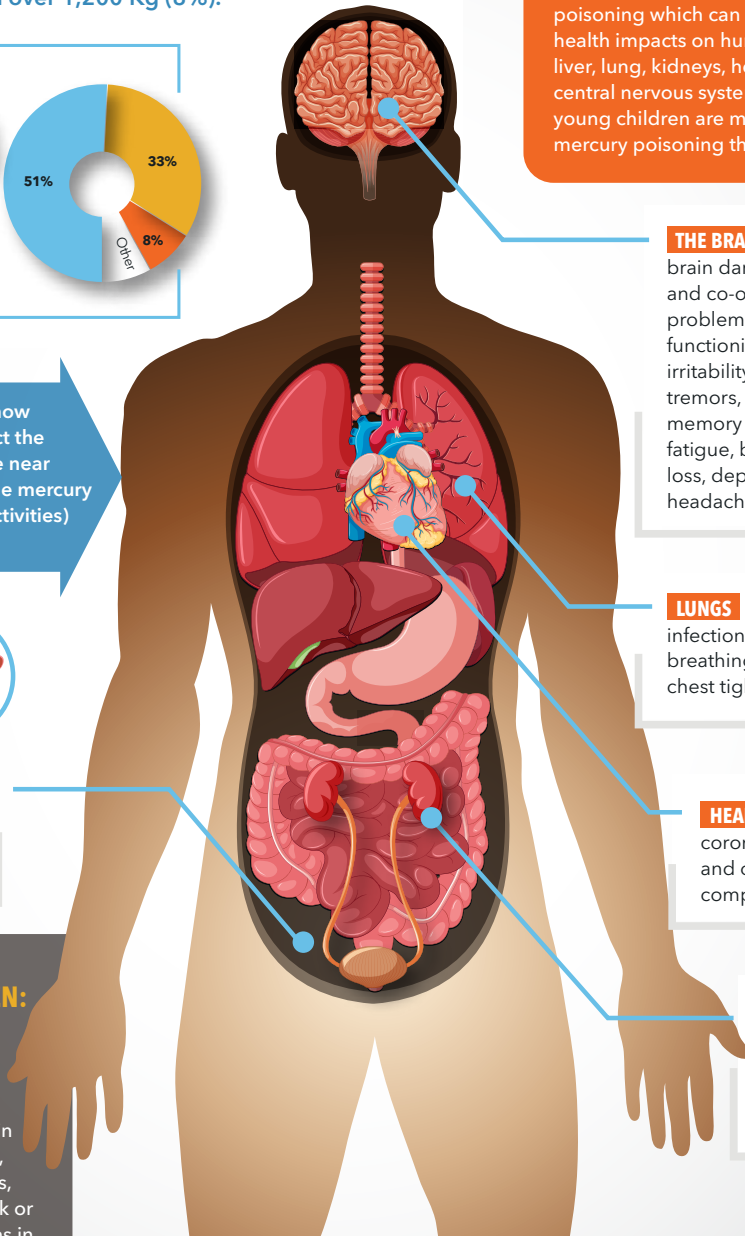


## REPRODUCTIVE SYSTEM

Reduced fertility in males and females, birth of abnormal offspring.

## UNBORN CHILDREN, INFANTS AND CHILDREN:

Mercury in the mother's body passes to the foetus and can also pass to a nursing infant through breast milk. It can cause brain damage, mental retardation, poor coordination, blindness, seizures, an inability to speak or walk and other complications in unborn children and infants.



**THE BRAIN** Permanent brain damage, movement and co-ordination problems. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision, memory loss, drowsiness, fatigue, blindness, hearing loss, depression and headaches.

**LUNGS** Lung damage, infections, cough, asthma, breathing difficulties and chest tightness.

**HEART** Hypertension, coronary heart disease and other cardiac complications.

**KIDNEYS** Kidney complications and dysfunction resulting in renal failure.





Courtesy photo of IEXXI

**River Moron that serves the community.**

# Amudat gold company accused of polluting community water

*Company denies, blames “ill-intentioned” individuals of attempting to incite the community*

BY ROBERT MWESIGYE

**A** mining community in Chepkararat, Lokales Parish, Karita Sub-County in Amudat district is accusing Evergrande Mineral Resources, a gold mining

company, of polluting their only water source with toxic waste.

River Moron, which serves communities in the villages of Cheptakol, Kakrkech, Nakwapua, Moron, Nachur and Murwakoria has turned



colour, much to the bewilderment of the locals in the area.

Residents were alarmed when their children developed skin irritations after swimming in the river. “One morning in October (2022), we woke up to find the water looking brown and black. The children as usual got into the water and started playing,” narrates one of the residents. “The following day, the children all had irritable skin with a condition that manifested like chicken pox. The goats that first drank that water that day all died shortly after, and we warned others not to water their animals from there,” he says.

Residents further report that they have over time complained about the company dumping waste in the river, but all efforts to have their concerns addressed by authorities have yielded nothing. Some accuse the authorities of being compromised by the company.

Sagaki Patrick, the Amudat District Health Officer, told this publication that those reports reached his office upon which a public health team was dispatched to investigate the issue. The team is yet to submit its report to inform the way forward. “I am aware of this issue,” he said.

Officials at the Directorate of Geological Survey and Mines noted that there are artisanal miners who are also operating



**I do not use mercury or any hazardous chemical in my operations. In any case artisanal miners have been operating here before us and we all know they purify their gold using mercury**

in the same area, but promised investigations to ascertain the source of the pollution.

When this publication spoke to Evergrande Resources Managing Director, Okello Rogers, he said the issue was first brought to his attention when he was away but on returning, he, together with the area police and members of the community went on a fact-finding mission to ascertain the allegations. He maintains that his company is not the source of the pollution. “I even offered to test my water that I use at the facility to prove to them that it was free of toxins,” he said.

Mr. Okello shifted blame to the artisanal miners who work in the same area. “I do not use mercury or any hazardous chemical in my operations. In any case artisanal miners have been operating here before us and we all know they purify their gold using mercury,” noted Okello.

Mr. Okello said “ill-intending” individuals are seeking to exploit the situation to turn the community against his company.

Evergrande is developing a modern underground gold mine in the area. The company has been actively engaged in some community initiatives, including repairing two boreholes in Chepkararat and Cheptokol for the community to have clean water. ■



*(l-r) UGAASM chairperson JB Bukya; Fargo MD and UGAASM general secretary Emmanuel Kibirige after signing an MoU.*

## Fargo Commodities Trading Uganda pioneers sustainable gold extraction in partnership with UGAASM

**I**n a groundbreaking collaboration, Fargo Commodities Trading Uganda has joined forces with the Uganda Artisanal and Small-Scale Miners Association (UGAASM) to revolutionize gold extraction methods and uplift the standards of small-scale mining operations.

The Ugandan government's ban on mercury usage in mining activities prompted Fargo's commitment to assist UGAASM in transitioning to a more environmentally friendly and sustainable approach. Mercury, known for its harmful effects on human health and the environment, has long been a concern in the gold extraction process.

Fargo is spearheading the adoption of the borax method as a safer alternative to mercury. This innovative technique not only adheres to environmental regulations but also ensures the well-being of the miners involved in the extraction process. The borax method stands out for its minimal ecological impact, offering a promising step towards responsible and ethical gold production.

The partnership extends beyond the elimination of mercury, with Fargo actively involved in upgrading the overall mining operations of UGAASM. The aim is to enhance efficiency, safety, and productivity, ensuring that small-scale miners can thrive in a sustainable and regulated industry.

Through this collaboration, Fargo is providing technical expertise, modern equipment, and training programs to empower the artisanal miners. This holistic approach seeks to not only comply with governmental regulations but also to create a positive socio-economic impact within the mining communities.

Speaking about the partnership, Fargo's spokesperson expressed enthusiasm for the positive changes it could bring. "We are committed to fostering responsible



mining practices that prioritize both the environment and the well-being of the communities involved. By embracing the borax method and upgrading mining operations, we aim to set a new standard for sustainable and ethical gold extraction."

UGAASM leadership has welcomed this collaboration as a transformative step towards responsible mining. The partnership is viewed as a catalyst for uplifting the artisanal and small-scale mining sector in Uganda, promoting a model that other entities can follow for a more sustainable future.

The Fargo-UGAASM partnership marks a pivotal moment in the evolution of Uganda's gold mining industry.

By phasing out mercury and introducing sustainable practices, the collaboration not only aligns with governmental regulations but also sets a commendable example for responsible mining globally. The joint efforts of Fargo Commodities Trading Uganda and UGAASM signify a positive shift towards a more environmentally conscious and socially responsible mining sector in Uganda. ■

**We are committed to fostering responsible mining practices that prioritize both the environment and the well-being of the communities involved. By embracing the borax method and upgrading mining operations, we aim to set a new standard for sustainable and ethical gold extraction**



# Visualizing Uganda's National and Energy Security Interests through the Critical Minerals Industry: The Role of the National Mining Company

*Critical mineral resource-rich Great Lakes Regional member states under the ICGLR framework should treat access to critical raw materials as a matter of national and regional security.*

BY BWESIGYE DON BINYINA

In 2018, Cabinet endorsed Uganda's revised Mining and Minerals Policy, 2018. This was followed by the review of Uganda's Mining Act, 2003 and Mining Regulations 2004 leading to a new Mining and Minerals Act, and regulations of 2022 and 2023 respectively.



(RINR) by passing the International Conference on the Great Lakes Region (Implementation of the Pact on Security, Stability and Development in the Great Lakes Region) (Prevention of Illegal Exploitation of and Illicit Trade in Designated Minerals) Act and Regulations, 2023.

In 2023, Parliament domesticated the ICGLR Protocol on the Regional Initiative Against the Illegal Exploitation of Natural Resources

The above mining policy and regulatory reforms were followed by the recent introduction of Uganda's Energy Transition Plan.

The Mining and Minerals Act establishes the National Mining Company (NMC) which is wholly owned by the State to manage Uganda's commercial and participating interests in mineral agreements. The NMC is charged with managing the state's strategic commercial interests in the mineral sub-sector, optimisation of value for its citizens, participation in joint ventures in which it holds an interest, and participation in meetings in furtherance of its participation in the respective joint operating agreements.

The NMC is by law charged with studying and proposing new mining ventures locally and internationally and to undertake the exploration and mining operations in the best interest of the State where private entities are unwilling to do so.

Uganda's Energy Transition Plan (ETP) which was launched on the 5th December, 2023 at the COP28 Climate Summit in Dubai, provides a vision for Uganda's pathway to universal energy access by 2030 and a more realistic target to reach net-zero emissions by 2065. Aside from a passing mention of critical mineral deposits of graphite at Orom in Northern Uganda, Copper, and Cobalt in Western region and Rare Earth Elements at Makuutu, Busoga Region in Eastern Uganda, the ETP understates the importance of critical minerals in driving Uganda's energy security and ultimately its national security.

The ETP rightly proposes the need to undertake geological surveys to better understand critical mineral potential. It calls for the application and enforcement of rigorous environmental and labour standards in the mining sector, including reporting obligations, transparency standards, and integrating these regulations into the licensing process. It observes the need to assess the energy needs of mining operations and develop infrastructure to power these

operations and ensure sustainable transport to markets.

However, the ETP falls short of recognising that Uganda's energy transition vision is incomplete without a critical minerals vision (demand and supply portfolio). The plan erroneously encourages tax incentives in an already economically incentivised sector driven by high demand, low supplies and obscene economic rents amidst the green energy climate change and a long-term forecast resource boom cycle.

The plan fails to map all the country's critical minerals potential. It lacks economic supply and demand models for critical mineral enablers and drivers for the proposed 2065 net-zero emissions scenario. It is also silent on green energy technology application for the different applications, ranging from our flagship EV-Technology innovation, Kiira EV's critical minerals demand, geothermal technology, solar and wind technology mineral demand and supply models in activation of our untapped abundant renewables.

These identified gaps in Uganda's ETP can be plugged by the National Mining Company through its mandate to study and propose mining ventures locally and internationally.

Mapping all the country's critical minerals potential (resources and reserves), ranging from lithium, cobalt, nickel, graphite, rare earth elements, iron ore, manganese, tin, coltan, tungsten and copper will be critical to the realisation of Uganda's green economy vision.

It will take national planning and investment in human capital and skills development by 2065 to plug all the mineral sector skills shortage listed in National Development Plan III. The National Mining Company will also require budget allocations to undertake

extensive exploration of critical minerals as a matter of national and/or energy security.

In the absence of a country's Critical Minerals Strategy and mineral stock-piling policies and laws to safeguard national and energy security, the National Mining Company is well placed within Uganda's mining policy and regulatory framework to step up to the plate in protection of the country's national security by delivering the critical minerals necessary to drive the Energy Transition vision, into a futuristic secure green energy economy.

The boundless nature of minerals and their geological pre-existence implies that the National Mining Company will have to put regional resource potential and geopolitics into consideration. The company must tap into existing regional synergies under the ICGLR and shared regional security and energy transition development interests to address national critical minerals demand and supply shortages.

In December 2023, China placed a moratorium on the export of technology to make rare earth magnets on top of an already existing ban on export of technologies to extract and separate strategic critical minerals and materials. These developments from the world's leading stockpiler of critical minerals and controller of critical mineral processing technology should unite critical mineral resource rich countries in the Great Lakes Region under the ICGLR framework to treat access to critical raw materials as a matter of national and regional security.

Countries such as Uganda, DRC, Tanzania and Zambia with significant resources/reserves of graphite, rare earth elements, cobalt,

copper and nickel need to establish strategic alliances with Global North economies willing to collaborate in the exploitation and establishment of value addition refineries within the Great Lakes Region to meet the region's energy transition strategic interests.

The EU has already demonstrated its willingness to engage African countries under the EU Critical Minerals Strategy in addressing their need to develop domestic and regional value addition credentials. The E.U also faces fears and risks of critical minerals supply shortages and believes that such collaborations with African countries will be mutually beneficial.

African economies rich in critical minerals could access refining and processing technology, retain value addition in form of jobs created, rents and revenues retained in their economies while the E.U would secure resource supplies for its industries and ability to meet its energy transition goals.

Uganda's National Mining Company has a significant role to play by building regional collaborations and shared commercial and national interests between the Great Lakes Region and the E.U to drive the country's regional value addition credentials and access to critical minerals processing technologies critical to the country's Energy Transition future.

Such new strategic common interest alliances will decrease the bullish and monopolistic behaviour exhibited by China in the shift towards a cleaner energy future. ■

***Mr. Binyina is a Mining and Energy Legal Economist. He is the Executive Director at the Africa Centre for Energy and Mineral Policy (ACEMP).***

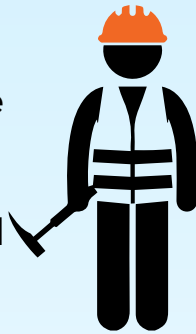


# Did You Know?

According to the **Mining and Minerals Act, 2022**, it is the responsibility of **the holder of a mineral right, licence, or permit**:



To ensure measures are put in place to secure the safety, health and welfare of all persons engaged in mining operations.



Not to employ forced labour, including unregulated use of prison labour.



Not to employ or in any way use a person under fourteen years of age in a mine, or in any other worksite that places the child's well-being, education, physical or mental health, moral or social development at risk.



Not to employ undocumented workers, migrant workers, or any other person without an appropriate work permit or authorisation.



# RESERVE YOUR SEAT TODAY!

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