

Testimony of Stavros Nicolas Niarchos before the Congressional-Executive Commission on China

Chairman Smith, Chairman Merkley and all other members of the Commission, Thank you for inviting me to speak. I am here to testify about the environmental impact of copper-cobalt mining in the southern Democratic Republic of the Congo. I visited the DRC six times between 2019 and 2022 reporting for the *New Yorker*, the *Nation* and *Interlope* magazines. On each of these trips, and on trips I have made for an upcoming book, I have seen the intense environmental degradation and deleterious effects of the practice on the health of the local population.

Copper and cobalt are two key materials for the creation of lithium-ion batteries, electric devices and especially for the electrification of transport, which is an important factor in the reduction of fossil fuel emissions and the slowing of climate change. It is also an important economic factor—strategic firms like Tesla use lithium-ion batteries in their products. Around 70% of the global cobalt supply comes from the DRC. A 2021 report by the World Bank estimated that we will need three billion tons or more of metals to achieve a “below 2 degrees future.”

But the question we must ask ourselves is whether the harm done by the extraction by these metals—and indeed the fossil fuels expended in their mining, transport, processing and so on—does not outweigh the benefit. Is the juice worth the squeeze?

Too often have natural environments been destroyed in the name of progress, and too often have the lives of people far from the cities in which minerals are consumed been destroyed. The local population does not benefit and are left with little more than holes in the ground. There is even a term for these places, often unspoiled habitats that are carved up when a mineral is found under their soil. They are known as “sacrifice zones.”

In reporting for the *New Yorker* and the *Nation*, I have seen how landscapes have been destroyed, water polluted and air filled with dust and carbon as mining companies rush to extract minerals like copper, cobalt, lithium and phosphates. Oftentimes, human rights abuses go hand-in-glove with these environmental catastrophes. In Congo, the miombo forests of the southern savannah have been cut back and the land looks as if it has been bombed; in Indonesia, the lust for battery nickel is responsible for seas pumped with chemicals and air clogged with coal; in the Western Sahara, where Morocco extracts phosphate, activists are regularly attacked by the security services—there, the Korean company LG and the Chinese company Huayou have formed a joint venture to produce Lithium Iron Phosphate batteries. I could go on and on.

But I have also seen that there are ways to mine responsibly, ways in which mining can be done in what is known as a “closed loop.” I have seen how this is possible in the US, in Idaho. Even in Congo, some of the mines, and especially the giant Kamoto Copper Company mine near the town of Kolwezi, which I toured last year, have implemented

environmental protocols aimed at ameliorating and moderating the environmental impact of mining.

Sadly, these examples are exceptions to the rule, and an environmental catastrophe is underway in southern DRC. The rush to produce devices, batteries and electric products more cheaply have created a demand for metals that has led to more and more unscrupulous behavior. Chinese firms and traders are at the forefront of these practices. There is a saying in Congo: “if they don’t give their workers shoes in their own country, why would they give us shoes here?”

In Congo, there are two types of mine, although there are gradations between these two. There are industrial mines, which use modern and mechanized methods. They are responsible for the majority of the cobalt that comes out of Congo. The industrial mines I have been allowed to visit have emphasized their environmental mitigation efforts.

However, I was not permitted to visit the giant Tenke-Fungurume mine, located between the towns of Likasi and Kolwezi and operated by the giant Chinese firm CMOC. Other journalists have been subject to harassment visiting the Tenke-Fungurume site. I visited an adjacent site where small scale miners showed me polluted rivers in which women washed clothes and minerals.

The second type of mine in Congo is the artisanal mine. The world is home to some 45 million “artisanal miners” —people who mine for themselves or small cooperatives. Congo’s copper-and-cobalt belt is home to some 200,000 of these

miners who sell the ore they collect to “depots” or “maisons” as they are known.

Before sale at these depots but in some cases after, the ore is crudely processed by washing it in local water supplies.

Studies show that fish in rivers in the mining provinces have been contaminated with heavy metals and uranium. At the village of Samukinda, I saw how cobalt washing, as well as effluent from a factory processing cobalt and copper, had destroyed fields. The chief of the village, Rikomeno Samukinda, explained that they could no longer grow food there and more and more of the villagers had to take risky mining jobs in order to provide for their families. His associates showed me water coming from a pipe from the facility that had a mild greenish colour, and also said they had seen the dumping of residue from pressure acid leaching of cobalt, a process to convert heterogenite ore to cobalt hydroxide that uses chemicals like sulfuric acid.

In southern Congo, women wash raw mining material, which is often full of toxic metals and, in some cases, mildly radioactive. Stories abound of artisanal miners in the town of Likasi dying from radiation poisoning. Congo’s government has sealed off the Tshinkolobwe mine, where the uranium for the Hiroshima bomb came from, but miners are working nearby in barely protected conditions. If a pregnant woman works with such heavy metals as cobalt, it can increase her chances of having a stillbirth or a child with birth defects.

According to a recent study in *The Lancet*, women in southern Congo “had metal concentrations that are among the highest ever reported for pregnant women.”

The study also found a strong link between fathers who worked with mining chemicals and fetal abnormalities in their children, noting that “paternal occupational mining exposure was the factor most strongly associated with birth defects.”

Furthermore, children as young as three mine and handle the toxic ore. They are sometimes drugged and deprived of food. These factors all contribute to developmental disorders, and reduce life expectancy in the mining regions of Congo.

In March 2022, I spent a day with Dr. Billy Mukong, a local physician in the mining town of Kolwezi. As Dr. Mukong did his rounds, he introduced me to women whose children were born with defects. Some had swollen heads. Some were developmentally disabled. The defects, he said, were thanks to exposure to dust that is blown off the back of trucks carrying raw and processed ore around Kolwezi. (It is worth noting here that some of the women we met said they ate soil during pregnancy as a part of a traditional remedy, which Mukong said would also increase their likelihood of exposure to heavy metals poisoning.) Over and over again, I saw women and men with blistered arms from exposure to toxic chemicals.

The depots where the ore is collected are often run by foreign traders. Many are Chinese, Lebanese and Indian

nationals who have settled in the region. Some of the depots are owned by or supply larger depots owned by international companies. The most prominent of these is Congo Dongfang Mining, or CDM.

CDM is a subsidiary of Huayou, a China-based company that has supplied cobalt to firms like Apple and Samsung. CDM has said they have made efforts to clean up their supply chain and to ensure that children, for example, are not mining cobalt. But last year I travelled from an illegal artisanal site outside the town of Fungurume with a local dealer in copper and cobalt ore who pointed out to me where he sold his product. The site was owned by CDM, who could not possibly have controlled how the ore was mined or who mined it.

When cobalt is collected, it is processed into hydroxide. This is often done inside the DRC, but sometimes the unprocessed product is shipped out on flatbed trucks. At the Kasumbalesa border post, trucks idle for days until they are allowed out of the country. People in the towns around complain of asthma caused by the fumes.

At processing facilities in China and Korea, this material can be mixed with industrial product before it becomes the battery cathodes that we use in electric vehicles and also in everyday appliances like laptops and cellphones. More needs to be done to trace this supply chain and ensure the rights of the people at the very bottom of it.

We must also not forget the very real human rights abuses that attend the extraction of battery metals in the DRC. Children are brutalized, women are violated, and men are subject to wage slavery. Abuses of human rights happen at the bottom of the supply chain, but also to people who are trying to clarify what is happening in the supply chain.

In my own work, I was disappeared and detained for six days by the Democratic Republic of the Congo's government as I tried to shed light on some of the abuses I document above, as well as clarify the links between armed groups and the mines. I would like to take this opportunity to thank the members of this committee and others in the U.S. government who helped secure my release. Some Congolese journalists are not so lucky: the journalist Stanis Bujakera Tshiamala languishes in jail for a report that he reportedly did not even write. More must be done to promote transparency and thorough reporting on the supply chain, which firms and governments would rather keep secret. (I have been detained twice reporting on issues around these minerals, and I was not issued a visa to report on a Lithium-ion battery conference in China this summer.)

I would like to close with a thought or two about solutions. The simple interdiction of Congolese cobalt is not enough. Such a ban would have a very damaging effect on the poorest people in that nation. It also wouldn't stop artisanal mining: copper is prevalent in most of the ore in Congo, and miners will sell the ore for copper just as soon as they would for cobalt. In the east of DRC, we have seen how bans of tantalum and tin ore have contributed to criminality instead

of curbing it, so new solutions must be envisaged there. They have also empowered unscrupulous traders who deal in falsified tags. Let's not make the same mistake again.

The consuming countries need to provide real solutions to address the lack of work in places like the DRC, to provide alternatives to artisanal mining, or at least to make it safer and cleaner. Countries like the US need to insist on environmental protections, and on recycling to recover critical metals from used devices.

We also need to ensure that democracy and the rule of law are upheld. As Congo moves toward its elections this December, I believe the United States should insist on a free and a fair voting process as the bedrock of any state of law. This will be key in regulating this industry and making sure that value can be shared with some of the poorest people in the world.

Thank you for your time today.