

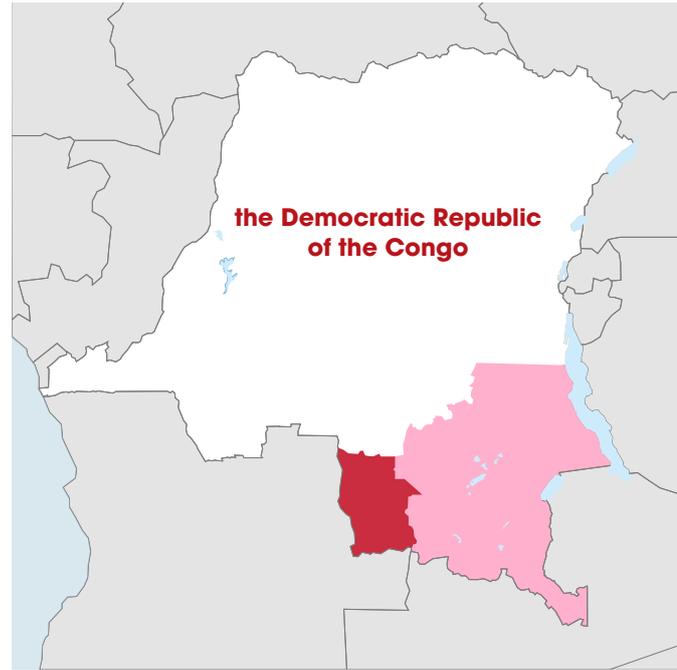
# REPORTING CLIMATE CHANGE: A PRACTICAL GUIDE FOR AFRICAN JOURNALISTS

The cobalt supply chain in the Democratic  
Republic of the Congo



## The Quick Take

The minerals and metals powering the electric vehicle (EV) revolution have become the oil of the 21st century. None, at least for now, are more important than cobalt – a critical ingredient in the batteries used to power next-generation electrified cars, buses, and trucks. Cobalt’s unique properties allow EV batteries to generate more energy while not overheating. But now one country – the Democratic Republic of the Congo (DRC) – which has more of this essential resource than anywhere else, is at the center of a high-stakes geopolitical competition over who will control the future of mobility.



- Lualaba Province
- Haute-Katanga Province

## The Story in Numbers:

- 145,000** The tonnage of cobalt produced by DRC in 2022
- 73%** The DRC’s share of annual cobalt production.
- \$3.50** Average daily earning for an artisanal cobalt miner in the DRC
- 15 - 30%** Share of cobalt mined in the DRC by artisanal small-scale miners
- 65%** Amount of cobalt refined in China



### 3 Things you should know:

**1.** DRC cobalt and copper industry landscape is more diversified than we imagine.

Chinese companies collectively dominate the cobalt mining industry in the DRC but a Swiss company, Glencore, is the single largest producer.

**2.**

EV batteries account for 40% of total cobalt usage each year with the rest used in consumer devices, defense technology, and other advanced electronics.

The price of cobalt plunged by 30% in 2023 to less than \$35,000/ton in August owing to abundant supply in the market

**3.**

## Cobalt Is the New Oil

Cobalt is one of dozens of minerals and metals used to manufacture batteries that power a wide array of vehicles and electronic devices. Most electric vehicles are powered by batteries that use a combination of nickel and manganese, together with cobalt, so-called NMC batteries. The phone in your pocket also contains some cobalt as do some of the components on the world's most advanced fighter jets including the F35.



Engineers really like using cobalt in all of these devices because it is able to generate a lot more power at much lower temperatures than other metals. That is a critical concern for products like cars, phones, and planes where fires caused by overheating batteries can have catastrophic consequences.

Even though new cobalt-free batteries are becoming increasingly popular, it will take years even decades, to match the blue metal's performance - According to minerals intelligence company Benchmark cobalt demand is expected to rise by the end of the decade with EV battery demand as the main driver - which explains why this resource is now the focus of so much attention in Africa and around the world.

Therefore, for the foreseeable future, cobalt will remain an essential ingredient that will power the transition from internal combustion engines to new electrified mobility.

## Why the Democratic Republic of the Congo Is the New Saudi Arabia

In the cobalt business, there is only one country that matters: the Democratic Republic of the Congo (DRC).

The DRC alone accounts for almost half of the world's known reserves and a whopping 72% of total annual cobalt output. DRC also has the world's largest cobalt reserves, at some 3.5 million metric tons as of 2021. The total global cobalt reserves amount to 7.6 million metric tons. This means nearly half of the world's reserves of the metal.

While large discoveries of other metals used to manufacture EV batteries are found in various countries around the world, that has not been the case, at least so far, with cobalt. With the exception of Australia, all other countries remain fringe players with only single-digit market shares.

The bulk of cobalt mining in the DRC takes place in two southeastern provinces, Lualaba and Haut Katanga, more than a thousand kilometers away from the capital Kinshasa.

**Democratic Republic Of Congo Was The Largest Producer of Cobalt Worldwide In 2021**



showing percentage of Global production of cobalt





That makes this vast cobalt belt one of the world's most strategically important regions and explains why the world's major powers are now aggressively jockeying for a larger share of this precious commodity.

But it's not easy for foreign mining companies to operate in a country like the DRC, which is one of the world's poorest, most corrupt nations, plagued by weak governance. In its 2022 annual survey of mining companies, the Fraser Institute listed the DRC among the top 10 worst countries in which to run mining operations.

Given these difficult conditions, a number of mostly Western companies have shied away from investing in the country's mining sector, creating a strategic opening for Chinese operators who have significantly higher levels of risk tolerance mainly due to less public scrutiny than their Western counterparts for private companies and strong institutional backing for state-owned enterprises

## A Who's Who Guide to the Key Actors in the Congolese Cobalt Supply Chain

The extractive industry in the DRC is very different from those in most other countries where a set of well-established actors, often state-owned, dominate. What is largely a steady, predictable business. That is definitely not the case in the DRC.

Mining in the country, particularly cobalt, is in many ways unlike anywhere else in the world.

Not only is the DRC enormous in size - Africa's second-largest country - but the sheer scale of its unrivaled resource wealth makes it truly unique. That abundance is also inherently linked to historical traumas

that continue to haunt the country to this day.

Conflict, poverty, corruption, and weak governance are all ubiquitous in present-day DRC, particularly in the resource-rich eastern part of the country and in some areas in the southeastern copperbelt, which makes it vastly more difficult to operate in this country than almost anywhere else in the world.

So, to understand how the mining industry works, it is imperative to first understand the landscape of who the key players are and why they are important.

### The National Government

The government is the main authority in mining management in the DRC. Through the provincial representations of its mining administration - the Mining Cadastre, the Provincial Direction of Mines - it exercises quasi-direct control over industrial mining activities. And when it comes to copper and cobalt, state-owned Gécamines also play a pivotal role.

When it comes to awarding and negotiating major mining contracts, the central government, through the Ministry of Mines and the Office of the President of the Republic, are the main decision-makers.

However, national stakeholders, including the president, have to strike a delicate balance managing the provinces, the mining companies, prominent provincial leaders, and the larger socio-geopolitics associated with cobalt mining.

<b>The Provincial Governments</b>	The governors of Haut Katanga and Lualaba provinces are among the most influential stakeholders in this sector due to the direct influence they have over the functioning of mining operations in their provinces. Like the president, their power is not absolute and they too must strike a balance in managing ties with the mining companies, the national government, and local stakeholders including powerful army officers, the Republican Guard, and local communities.
<b>Gécamines</b>	Gécamines is the state-owned mining company that is the key player in all of the major mining deals with the Chinese and other foreign firms in the copper and cobalt sector  Founded in 1966, the company was once very profitable but later fell victim to unbridled corruption and managerial incompetence that crippled the company. Today, the firm is under new management and attempting to rectify some of the bad deals it signed under previous administrations.
<b>The Chinese</b>	Since the early 2000s, the Chinese have been a formidable presence in the Congolese cobalt sector and skillfully leveraged Beijing's resources-for-infrastructure development strategy to dominate large portions of the cobalt supply chain.  China's approach is unique in how it applies a full-scale, all-of-government approach, integrating diplomatic, state-owned companies, state-backed financing, and even private companies.
<b>The Others</b>	While Chinese mining companies are collectively responsible for more cobalt production than anyone else, they are by no means alone in the sector. In fact, the Swiss mining giant Glencore is actually the single largest cobalt producer.  Other major players include companies from Canada, Australia, the UK, UAE, and Kazakhstan, among others that are actively mining cobalt in the DRC.
<b>What About the United States?</b>	Freeport McMoRan was the last US company that mined cobalt in the DRC but exited the market and sold its stake in the massive Tenke Fungurume mine to the Chinese mining giant CMOC in 2016.  Presently, there is no US mining presence in the Congolese cobalt sector.



### **The Bottom Line:**

The cobalt mining sector is significantly more complex than its portrayal in both African and international media where disproportionate emphasis is often placed on the role of Chinese firms. While the Chinese are indeed major players, they also operate in an intricate matrix with a multitude of influential stakeholders.

## GLOSSARY:

ARTISANAL MINING	INDUSTRIAL MINING
<p>Artisanal cobalt mining in the DRC refers to small-scale, often informal, mining operations that focus on extracting cobalt ore. Unlike large, industrial mining operations that are usually run by companies with heavy machinery and a significant workforce, artisanal mining is generally characterized by manual, labor-intensive methods. Miners, sometimes including children, dig for cobalt with rudimentary tools and often without adequate safety measures or protective equipment.</p> <p>Legally they are bound to carry out their activities in areas designated by the mining registry and reserved for artisanal mining. In reality, however, they are often found on sites reserved for industrial mining, creating a difficult co-existence with industrial mines.</p>	<p>Industrial cobalt mining in the DRC refers to large-scale, formalized mining operations. These are usually undertaken by domestic and international corporations that possess the capital, expertise, and equipment to explore, develop, and operate cobalt mines.</p> <p>Such operations are a significant part of the DRC's economy and make the country the world's leading producer of cobalt, a metal that is essential for various technologies, including rechargeable batteries used in electric vehicles, laptops, and smartphones.</p>



Aerial view of the Chinese mining company Zijin Mining in Kolwezi, southern Democratic Republic of the Congo. Imago / Alamy Photo

## Q&A: The Role of Child Labor in the Congolese Cobalt Supply Chain

In many parts of the world, particularly in the US and Europe, the words “cobalt mining in the DRC” have become synonymous with “child mining” and “exploited labor.” The discussion about the role of child labor in

the cobalt supply chain is often motivated by good intentions but is poorly informed and lacks important broader context and nuance to understand the full scope of the issue.



The presence of child labor in the cobalt mining sector only takes place in small-scale artisanal mines, not the large industrial mines that account for the overwhelming majority of the output in the DRCC.

Just how much cobalt is mined artisanally is very hard to determine. Most experts believe it's somewhere between 15,000 and 30,000 tonnes annually which puts that in the range of 10% - 20% of the DRC's entire cobalt production.

In all, an estimated 100,000 to 200,000

people are employed in the artisanal cobalt mining sector, a number that can fluctuate wildly depending on market conditions, the security situation in the DRC, and other variables.

Although there are a number of legal texts and initiatives aimed at providing a framework for artisanal mining, many of the artisanal small-scale cobalt mines in the DRC remain unregulated, there is no definitive information on the precise number of children who work in the mines.

## **If children do work in the mines, then is the entire cobalt supply chain contaminated by the use of underage labor?**

The short answer is yes. There is a regulatory entity in charge of supervising and controlling artisanal mining sites. Unfortunately, the lack of sufficient means and manpower, coupled with structural

deficiencies hinder its ability to effectively do its job. That would explain why underage children and pregnant women are found in certain cobalt artisanal mining.



**The entire supply chain is, indeed, partially contaminated by some of the artisanally mined cobalt that is extracted by children and sold to the large industrial mining companies that absorb this output into their massive processing operations.**



## It is commonly said that child laborers work in Chinese-owned cobalt mines in the DRC. Is that true?

There is a widespread misperception that because Chinese mining companies are among the dominant actors in the Congolese cobalt extractive sector they are also implicated in child mining. The evidence, however, does not support that assertion. It is important to bear in mind that the Congolese government tends to reassign artisanal sites to industrial companies. This tends to create a de facto and often conflictual cohabitation between mining companies and artisanal miners, who tend

to live on the sites or in the surrounding area.

Chinese companies and individuals do not control the artisanal mines where child labor is used. Under Congolese law, artisanal mines are owned by domestic stakeholders. In contrast, the bulk of Chinese cobalt mining activity in the DRC is industrial, meaning that it operates in a highly automated, much more regulated environment.

### Where Clean Energy Metals are Produced



### Where Clean Energy Metals are Processed



Chinese mining companies in the DR Congo collectively produce more cobalt than any other country and ship all of that output back to China where it is processed so it can be used for many things, including rechargeable batteries, electronics, and even fighter jets.

Their major anxiety is that China could potentially weaponize its control of the cobalt supply chain by restricting access to this vital metal. This would have an immediate impact on vital industries in all industrialized countries given the interdependence of global supply chains.

The fact that Chinese companies, many backed by the state, are the dominant players in both the cobalt extractive and processing sectors is of great concern to governments in Europe, the U.S., and Japan, among others.

Many of China's rivals, notably the U.S., have passed new laws that aim to reduce their dependence on Chinese-mined and refined cobalt. Ultimately, these countries hope to build a new, parallel cobalt supply chain that is absent of any Chinese involvement. This, however, is much easier said than done.

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**The U.S. and Japan currently do not have a single mining company active in the DRC's cobalt mining sector and there is no indication that this is going to change anytime soon.**

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Since none of China's rivals in G7 countries have large state-owned mining companies or the power to compel their own private companies to begin mining cobalt in the DRC, which, of course, China can, then there is really no way these countries can effectively compete in this area.

One solution proposed by the U.S. is to rely on so-called “friend-shoring.” While the U.S. may not have any companies willing or able to mine cobalt in the DRC, companies in “friendly” Western countries like Canada, the UK, and Switzerland do. According to this theory, the U.S. can circumvent the Chinese by buying directly from them.

This sounds good in principle, but it is not that simple.

Many of these Western mining companies operating in the DRC cobalt sector are

closely intertwined with Chinese firms at almost every stage of the supply chain – from mining to logistics to processing – making it impossible, for now at least, for the US or any other country to buy refined Congolese cobalt that is free of Chinese involvement.

Now, China's rivals are looking to develop alternative cobalt supply chains outside of the DRC, but the problem there is that, at least so far, no other country in the world has the quantities of known reserves that currently exist in the DRC.

The bottom line is that for the foreseeable future, it will be largely difficult to separate China from the global cobalt supply chain regardless of how much it offends policymakers in Washington, Brussels, and Tokyo.



## WHO BENEFITS?

**The question on everyone's mind: Do the Congolese people benefit from the country's cobalt wealth?**

The simple answer is not as much as they should have. Cobalt accounts for almost a quarter of the DRC's estimated \$16 billion of annual exports, yet the vast majority of the people who mine the blue metal,

along with those in supporting industries, make little more than a few dollars a day. In 2022, according to the World Bank, 62% of the population earned just \$2.15 per day, highlighting the stark inequality that exists between the small number of elites who benefit enormously from the country's vast mineral wealth and the population at large that does not.

## The Future of Congolese Cobalt

There is growing anxiety within the DRC's mining industry that the country may have missed its moment to fully profit from this valuable resource. Several years ago, when supply was tight and prices were much higher, the DRC did not invest in the necessary infrastructure to move up the value chain to process raw cobalt.

Today, with prices half of what they were a few years ago, the profit margins are significantly smaller, making it more difficult, if not impossible, to afford the expensive power plants and factories needed to

compete with China and other countries.

Even the head of the Congolese state-run mining company Gécamines, Guy Robert Lukama, wondered whether the country had indeed missed the moment. "The window of opportunity we had to drive the market and keep big value here — we lost it," he lamented to the Financial Times in June 2023.

Consequently the DRC, like so many other raw commodity-exporting countries, remains stuck at the bottom of the value chain.



### 3 TRENDS TO WATCH

#### **1. The world is always going to need cobalt, just not as much of it:**

The challenges involved in mining cobalt from the DRC is prompting battery manufacturers and automakers to develop a new generation of cobalt-free power packs that will, eventually, significantly reduce demand for the blue metal.

When that happens, cobalt buyers can turn to other, more stable suppliers in Indonesia, Canada, and even the US to source cobalt needed for electronics and various defense technologies.

#### **2. The DRC will process some cobalt, but how much remains to be seen:**

The DRC and certain Western governments are determined to build domestic processing capabilities but those efforts will have to face tremendous challenges to make a substantial change in the supply chain of cobalt.

The combination of the DRC's governance challenges together with its lack of infrastructure and weak security environment make it too risky to invest the billions of dollars needed to refine critical minerals like cobalt.

#### **3. The Chinese have an insurmountable lead in cobalt and it's going to stay that way**

So far, there is no strong indication that any competitor, either corporate or government, will be able to mobilize a credible challenge to China's dominance in the cobalt mining and processing industries.

While China's rivals will continue to talk about creating alternative supply chains, they won't be able to move fast enough or compel their countries' private companies to make the same kind of large investments that Chinese firms have done and continue to do in the DRC.



# Insights about covering climate change from leading experts across the continent

Geraud Neema, Africa Editor at The China-Global South Project

### What do you see as the main challenge for African reporters in covering the cobalt story in the DRC?

The main problem that I see about the coverage of the cobalt story, particularly in the DRC is there's way too much focus on the national narrative. That is, it gets sucked into domestic politics, and reporting on this complicated issue is often oversimplified so rival factions - inside and outside of DRC - use it to score points against their rivals.



There's also, of course, a geopolitical angle as well and that's very important to understand as well. So, in the end, this is a story that African reporters have to look at from both the internal domestic side and within a larger international context. It's not easy. I know.

### What is the biggest mistake journalists make when reporting this story?

By far, the biggest challenge facing journalists assigned to report on this issue is that they just don't know enough about the topic. I don't say that as a criticism per se, but rather as an admission that this is an incredibly difficult story to cover if one doesn't have a thorough background in mining, political, economic, social and technological angles.

Too often, journalists approach this story with a limited understanding of what's important and then produce reports that are incomplete which ultimately deprives their audiences of an accurate accounting of what's really going on.

### Many African journalists rely heavily on US and European media narratives to shape their coverage of this story. How well do you think those international outlets cover the issue?

The international media often do a fairly good job in reporting this and there's certainly a lot of interest in cobalt mining in the US and Europe. But, and this is really important, there are often some very subtle biases in the reporting - mostly implicit, occasionally explicit - that do influence their narratives, particularly as it relates to China's involvement in the Congolese mining sector.

My advice for journalists and the general audience alike is to avoid relying too heavily on just Western reporting and instead dive into the data, research articles and listen to what civil society groups on the ground in the DRC are saying. That way, you'll get a more holistic picture of what's happening.

# Reporting Guide: Resources for African Journalists

People, books, and online resources that will help you to improve your reporting about cobalt mining in the Democratic Republic of the Congo.

## Who to Follow



**C.Géraud Neema**

@christiangeraud



**Okenda Jean Pierre**

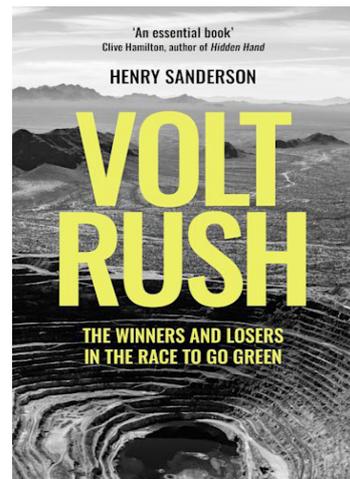
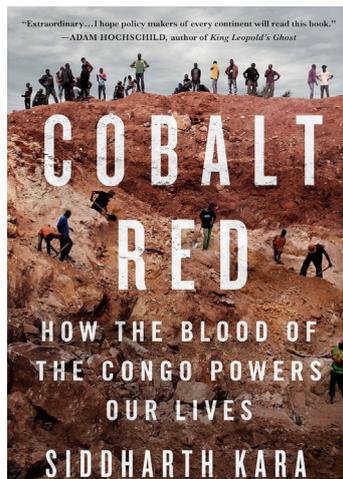
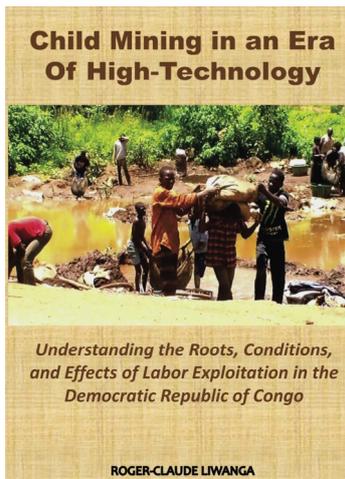
@OkendaPierre



**Frank Dixon Mugenyi**

@FrankMugenyi2

## Book Recommendations



## Cobalt Research Database

### Interactive Map of Copper & Cobalt Production in the DR Congo

The first-ever mapping of the entire copper and cobalt supply chain in the DR Congo that provides current production data, export tracking, logistics maps and an index of all the major mining companies.

English: [www.chinaglobalsouth.com/cobalt](http://www.chinaglobalsouth.com/cobalt)  
French: [www.projetafriquechine.com/cobalt](http://www.projetafriquechine.com/cobalt)



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