



resource matters

# From raw ore to local processing: ways to increase added value

› Towards a national strategy for energy transition minerals in the DRC



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December 2025



# STRATEGIC MINERALS: A LEVER FOR DEVELOPMENT

Cobalt, copper, lithium: **Resource Matters** advocates that the Congo should reap the full benefits of its strategic minerals, and that people living in mining areas should see the tangible benefits of the taxes paid to state entities.

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# Acronyms

3Ts: Tin, Tantalum, Tungsten

AETR: Average effective tax rate

Afreximbank: African Export-Import Bank

ARECOMS: Autorité de Régulation et de Contrôle des Marchés des Substances Minérales Stratégiques (Authority for the Regulation and Control of Strategic Mineral Substance Markets)

ARISE IIP: ARISE Integrate Industrial Platform

BEV: Battery Electric Vehicle

BFS: Bankable Feasibility Study

BNEF: Bloomberg New Energy Finance

CAMI: Mining Cadastre

CBC: Congolese Battery Council

CMOC: China Molybdenum Company

CREFDL: Centre de Recherche en Finances Publiques et Développement Local (Centre for Research on Public Finance and Local Development)

CTCPM: Cellule Technique de Coordination et de Planification Minière (Technical Cell for Coordination and Mining Planning)

DRC: Democratic Republic of the Congo

DTEs: Decentralised territorial entities

ECA: United Nations Economic Commission for Africa

EGC: Entreprise Générale du Cobalt (General Cobalt Company)

EITI: Extractive Industries Transparency Initiative

ERA: Electricity Regulatory Agency

EVs: Electric Vehicles

FOMIN: Fonds Minier pour les Générations Futures (Mining Fund for Future Generations)

Kamoa: Kamoa Copper

KCC: Kamoto Copper Company

LFP: Lithium Iron Phosphate

MSP: Minerals Security Partnership

NMC: Nickel-Manganese-Cobalt

NRGI: Natural Resource Governance Institute

OL: Operating licence

SADC: Southern African Development Community

SEZ: Special Economic Zone

SGN-C: Service géologique national du Congo (Congo National Geological Service)

Sicomines: Sino-Congolaise des Mines (Sino-Congolese mining joint venture)

SME: Small and Medium-sized Enterprises

SNEL: Société Nationale d'Électricité (National Electricity Society)

SX-EW: Solvent Extraction – Electrowinning

TFM: Tenke Fungurume Mining

USD: United States Dollar

# Executive Summary

The economic value of a mineral is derived not only from its extraction but also its processing. The Democratic Republic of the Congo (DRC) ranks among the world's most resource-rich nations, possessing vast mineral wealth that includes elements essential to the global energy transition and strategic emerging technologies, such as lithium, cobalt, copper, coltan and germanium. As of 2024, the DRC was the world's leading exporter of cobalt and its second-largest exporter of copper. Despite these dominant market positions, the domestic economic benefits remain limited because these minerals typically undergo only partial processing prior to export. For more than two decades, the DRC government has articulated a clear ambition to export minerals with the highest possible added value. While these objectives are codified in legislative frameworks and reinforced by political declarations, they continue to encounter significant obstacles. In this White Paper, Resource Matters provides an in-depth analysis of the DRC's various attempts at domestic mineral processing. The report examines the historical challenges faced and proposes actionable solutions to facilitate effective local processing and local added value. This analysis specifically focuses on copper, cobalt and lithium.

## **Copper: Regulatory Levers and Implementation**

Regarding copper, the 2002 Mining Code introduced a formal ban on the export of raw copper. During its first decade, however, this prohibition remained largely symbolic; structural, regulatory and institutional constraints led to several postponements of its implementation. In practice, it was only after 2006 that the ban began to be partially respected. To achieve effective local processing and value addition for copper, the government has three primary levers at its disposal:

- Elimination of exemptions: A definitive end should be put to the exemptions that continue to permit the export of copper concentrates.
- Strategic partnerships: The development of a strategic energy investment plan in partnership with mining provinces, financial backers, mining companies and other private actors.
- Licensing requirements: When granting operating licenses, the state should require holders to submit a processing plan for minerals extracted within the area covered by their license.

## **Cobalt: Value Chain integration and Market Stability**

For several years, Congolese authorities have expressed their ambition to advance the value chain by attracting investment for the production of battery precursors, rather than just sulphates. This is a critical step in penetrating global value chains. However, significant barriers remain, including foreign domination of key stages in the value chain, extreme price volatility, infrastructure deficits and an inadequate regulatory framework. The year 2024 saw a historic collapse in cobalt prices driven by an oversupply from the DRC. In response, the DRC suspended cobalt exports between February and October 2025 to transition toward an export quota system, where allocations are granted to companies according to specific criteria. This represents a major step forward in terms of redefining its role in the global cobalt market. Furthermore, the DRC has adopted a strategy of establishing special economic zones featuring flexible and highly attractive investment regulations.

Today, there are more practical solutions to ensure that the DRC exports cobalt that has been satisfactorily processed; on one hand, local cobalt processing could be included in the criteria for granting export quotas and, on the other, the finalization and operationalisation of the special economic zone launched in June 2022 should be accelerated. In factual terms, the Authority for the Regulation and Control of Strategic Mineral Substance Markets (ARECOMS) in the DRC has set a strategic quota

reserved for projects of national importance. To institutionalize this measure and align it with the legislative intent of the Mining Code, it must be formalised by an interministerial decree issued jointly by the Minister of Mines and the Minister of Industry.

## **Lithium: A proactive approach to emerging resources**

Lithium extraction in the DRC is in its nascent stages, yet geological evidence indicates immense potential, particularly for lithium in hard rock. At present, it appears likely that the first lithium will be produced in 2026. To avoid the historical pitfalls of low-level local processing seen in the copper and cobalt sectors, this analysis proposes the following solutions to the government: make local lithium value-addition a criterion for the granting of

operating licenses and strengthen the analyses of feasibility studies, among other reasons, to ensure that they include aspects relating to local processing and an energy plan for the mine's activities. The Manono lithium deposit – one of the world's largest untapped resources – provides the DRC with significant strategic leverage to attract investment. This should be utilized to select investors who possess the technical and financial capacity to process minerals locally and generate satisfactory added value for exports.

Achieving local processing and value addition in the DRC must be approached holistically across the entire mining industry value chain. To be effective, each link in the chain must formally integrate the requirements of local processing.

# Towards a national strategy for energy transition minerals in the DRC

Global demand for the minerals required for energy transition technology could quadruple by 2040.<sup>1</sup> The DRC, rich in copper, cobalt, lithium, coltan, zinc and germanium, is well positioned to meet this growing demand. More than 60% of the world's cobalt reserves are located in the south of the country, which has produced more than two-thirds of the world's cobalt over the last five years. Since 2023, the DRC has also become the world's second largest producer of copper. The east of the country is home to the world's highest-grade tin mine and remains the world's leading producer of coltan. The untapped lithium reserves in Manono add to its strategic importance.

Yet, the DRC remains one of the poorest countries in the world. More than half the population lives on less than 2.5 dollars a day. In rural areas, families often depend on subsistence farming, without reliable access to healthcare or education. The lack of public investment is glaring: roads without drainage pipes, schools without desks or textbooks, health centres without electricity or medicine. An estimated 9% to 22% of Congolese people have access to electricity - the figures are disputed - forcing millions of people to live in darkness and cook over wood fires.

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<sup>1</sup> International Energy Agency, Summary 2021, p.11.

## Opportunities and challenges for the DRC

The energy transition represents a unique opportunity for industrialisation and economic diversification in the DRC. It can attract productive investment, create skilled jobs and strengthen the local economic fabric. This potential is set out in the [Master Plan for Industrialisation, adopted in 2021](#).<sup>2</sup>

Several reforms have already been undertaken. The Mining Code was revised in 2018, allowing certain mineral substances to be declared "strategic". This is currently the case for cobalt, coltan and germanium.<sup>3</sup> New institutions have been created, such as the [Authority for the Regulation and Control of Strategic Mineral Substance Markets](#) (ARECOMS) and the [General Cobalt Company](#) (EGC) in 2019, as well as the [Centre of Excellence for Advanced Battery Research](#) (2022) and the [Congolesse Battery Council](#) (2023).

However, a number of obstacles stand in the way of local mineral processing. The lack of energy infrastructure, the weakness of industrial machinery, shortcomings in the regulatory framework, high logistical costs, as well as corruption and insecurity have negatively impacted investor confidence. Competition from other producing countries, such as Indonesia, and uncertainties on world markets, particularly the volatility of cobalt prices, add to this vulnerability.

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2 Congo Challenge: [MASTER PLAN FOR INDUSTRIALISATION IN THE DEMOCRATIC REPUBLIC OF THE CONGO](#)- Congo Challenge

3 [Decree](#) n° 18/24 of 24 November 2018 declaring cobalt, germanium and colombite-tantalite "coltan" as strategic mineral substances.

## Regaining control of the supply chain

Faced with the limitations of an economic model based on the export of low-grade minerals and the high volatility of international markets, the Congolese government has put in place a number of measures since the beginning of 2025 to improve control over the supply chain for strategic minerals. A temporary four-month suspension of cobalt exports - since extended for a further three months - was imposed in an attempt to stem the fall in prices.<sup>4</sup> Other decisions aim to provide a better framework for artisanal mining production and strengthen public control over the sector.<sup>5</sup>

These measures reflect a growing desire to regain control over the country's strategic resources. However, they often remain reactive, taken under the pressure of emergencies, and rarely form part of an overall vision. Today, the DRC asserts a more structured ambition: **to no longer be content simply extracting and exporting raw materials, but to process them locally in order to create more added value, jobs and income for the Congolese population.**

In the same vein, the former Minister of Mines, Kizito Pakabomba, stressed the importance of processing critical minerals locally. He highlighted the formative role that this processing could play in creating skilled jobs, increasing tax revenues, reducing the environmental impact of raw exports,

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4 ARECOMS, Decision n°001/ARECOMS/2025 of 22 February 2025 concerning the temporary suspension of cobalt export from the Democratic Republic of the Congo.

5 ARECOMS, Decision n°002/ARECOMS/2025 of 22 February 2025 relating to urgent regulatory measures concerning the cobalt sector. It is now forbidden to mix uncertified informally-mined minerals with those produced by the industry. Only the General Cobalt Company is authorised to export cobalt from the artisanal or semi-industrial sector. Mining activities involving children, pregnant women or vulnerable people are now banned. Companies that fail to comply with these rules risk losing their export licence.

and better integrating local communities into the benefits of the mining sector.

The Master Plan for Industrialisation, adopted in 2021, also provides a basis for structuring this vision. It is based on three major pillars:

- 1 Extending value chains throughout the national territory
- 2 Diversifying the economy beyond the mining sector
- 3 Substituting certain imports with competitive local production

As part of this process, the Technical Cell for Coordination and Mining Planning (CTCPM) drew up a mining strategy plan in 2025 aimed at achieving these objectives. This document highlights the need to go beyond simple extraction to build genuine industrial capacity around strategic minerals, in line with national economic priorities.

However, a number of key elements still need to be clarified in order to transform this ambition into an operational public policy:

- Which critical minerals should be included in the strategy?
- What levels of local processing are intended for each sector (cobalt, copper, lithium, etc.)? Which industrial segments should be prioritised (refining, battery precursors, cables, semi-finished products)?
- What regulatory and policy adjustments are required to achieve these levels of local processing?
- What infrastructure - roads, energy, rail, telecoms - should be developed as a priority to support this industrialisation?

- A genuine multiannual planning law, integrating the different stages and different minerals, to avoid the short-term "political interests" of the moment.

Regaining control of the supply chain in this new context means regaining control of the value chain, from the granting of mining permits to the approval of exports. A coherent industrial policy, based on clear strategic choices throughout the chain, with quantified targets and appropriate incentives, must be constructed. Only then will the DRC be able to transform its role in the global energy transition and turn its mineral resources into a genuine lever for inclusive economic and social development.

# **The White Paper:** A roadmap for creating local added value

This White Paper forms part of the State's effort to regain control of the supply chain. Conceived as an inspirational tool, it proposes concrete pathways to achieve the government's stated objective of increasing the local processing of critical mineral substances. It does not deal with aspects relating to the traceability or sanitation of artisanal production, although these are also government priorities.

It begins with an analysis of three emblematic sectors - copper, cobalt and lithium - to outline the efforts made to date to achieve greater local processing, and to illustrate the diversity of the issues and the obstacles encountered for each of these minerals.

It then presents strategic options for overcoming some of the main obstacles, such as the rigidity of the current regulatory framework, certain administrative practices that do not promote added value, and the large energy deficit facing the country.

Primarily aimed at Congolese decision-makers, it aims to identify concrete levers for action and to inform public policy choices in the field of industrialisation. It is also designed to guide technical and financial partners in their support for the implementation of this vision.

This work is based on interviews with Congolese and international experts, as well as the comparative study of mining strategies implemented by other producing countries such as Chile, Indonesia, South Africa and Argentina. It was enriched by discussions held at the Alternative Mining Indaba DRC in October 2024 in Kolwezi and in October 2025 in Lubumbashi, as well as at the Horizon 2050 Forum on energy transition minerals, organised by Resource Matters in December 2024 in Kinshasa, in collaboration with the national Ministry of Mines.

This White Paper reflects a collective effort to provide the DRC with a long-term vision, aligned with its economic, social and environmental ambitions, capable of making energy transition minerals a genuine lever for national transformation.



**Engagement with the CTCPM and Congolese civil society organisations in the development of the national strategy.**

# 1. Efforts to process minerals locally (2005-2025)

In the energy transition era, many producing countries are now aiming to capture part of the value chain beyond the simple production of metals. [Ghana](#), [Zimbabwe](#) and Chile, all potential lithium producers, have introduced export restrictions on low value-added minerals. In its strategy, Chile breaks the value chain down into five stages - mining, refining, electrochemical processes, battery components and battery assembly.<sup>6</sup> Chile wants to gradually work its way up the chain. Namibia has set itself similar targets.<sup>7</sup>

The same applies to the Democratic Republic of the Congo. One of the Congolese government's most clearly stated ambitions in terms of energy transition minerals is to increase the country's role in a more important part of the supply chain.

Contrary to press reports, exports of raw minerals have become rare in the country's most industrialised region, the south of the former province of Katanga. In present-day Haut-Katanga and Lualaba, almost all minerals undergo at least partial processing, such as concentration. According to data from the provincial mining division, exports of unwrought copper minerals represented around 0.11% of total copper

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<sup>6</sup> Chile, the national lithium strategy, p.16

<sup>7</sup> Namibia, Ministry of Mines and Energy, minerals policy of Namibia, p.21

exports in 2024.<sup>8</sup> For cobalt, no exports of raw cobalt were declared that year.

However, the DRC no longer wants to settle for exporting partially processed minerals. It wants to go beyond hydroxide with a cobalt content of around 35%; it wants to be able to produce battery precursors, a chemical mixture that requires nickel and manganese. It wants to attract local germanium processing to its territory, and even to process copper into semi-finished products.

These efforts are not new. The ban on raw ore exports dates back to the early 2000s, and efforts to do the same with concentrate exports began at least 10 years ago. But there are still a number of challenges to be overcome in order to achieve these ambitions. This is shown by the successive analysis of three sectors below: copper, cobalt and lithium.

### **Copper: twenty years of policies to create local added value**

Since the liberalisation of the mining sector in 2002, the Congolese government has expressed a constant desire to promote the local processing of minerals, starting with copper, a key resource for the national economy. While the political intentions have been stated on several occasions, putting them into practice has been hampered by various structural, regulatory and institutional obstacles. The experience of the

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<sup>8</sup> According to the statistics, the only company to have exported raw copper ore is Sinokatanga, with 76,000 tonnes of ore between May and July 2025 - or around 3,800 tonnes of contained copper if we assume that this ore contained 5% copper. In total, the DRC exported around 3.3 million tonnes of contained copper, according to the US Geological Survey. For statistics on provincial mining divisions, see <https://www.makutayamaendeleo.org/en/map/production>. Data from the US Geological Survey are available here: <https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-copper.pdf>.

last twenty years sheds valuable light on the conditions that need to be met to achieve complete processing into metallic copper - and even the emergence of a genuine local industry for finished products such as electrical cables.

### **Ban on exports of raw minerals**

The ban on exporting raw minerals was enshrined in the 2002 Mining Code, with any exemption requiring express authorisation from the Minister of Mines. Exporters had to demonstrate that it was impossible to process the ore within the national territory at an economically viable cost and prove the benefits for the DRC if export authorisation were granted.<sup>9</sup> This provision was designed to encourage investment in local processing.

However, during the first decade, the ban remained largely symbolic: with energy infrastructure in a state of disrepair and industrial facilities at a standstill, the export of raw minerals (particularly of informally-mined origin) and intermediate products was the rule rather than the exception. In a context of political uncertainty, the Congolese government did not have the leverage to require operators to invest heavily in processing.

### **Multiple postponements of the export ban on concentrates**

It was only after the 2006 elections and the prospect of greater political stability that the ban on the export of raw minerals began to be respected. In 2010, the provincial government of Katanga estimated that 75% of its exports were concentrated

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<sup>9</sup> Article 85 of the 2002 Mining Code.

minerals, i.e. minerals that have been enriched but not yet refined into metallic form.

The focus then shifted to "concentrates". Instead of banning exports, the provincial government of Katanga imposed a tax of \$60 per tonne of copper concentrate, rising to \$100 in 2013.<sup>10</sup>

Combined with a rise in global prices, this fiscal pressure prompted many operators to invest in processing facilities. This marked the start of a boom in the number of Solvent Extraction - Electrowinning (SX-EW) plants across the Congolese Copperbelt, enabling the production of 99% copper cathodes.

At national level, the central government repeatedly announced the ban on exports of concentrates, but without ever enforcing it in a sustainable way. Between 2013 and 2023, no fewer than eight measures or texts introduced or extended moratoria (see table). At every attempt, the mining sector, through the Chamber of Mines, protested, citing the energy deficit as a major obstacle to local processing. The government would systematically bow to pressure by granting general moratoria to the entire sector.

In its revision of the mining code in 2018, the legislature set operators a clear ultimatum: beyond March 2021, no extension of the deadline for local processing would be possible without parliamentary approval. In practice, however, the government continued to grant exemptions on a regular basis, demonstrating an inconsistent application of the law.

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<sup>10</sup> [Edict no.0001 of 20 April 2010](#) creating a provincial tax on concentrated mining products intended for export.

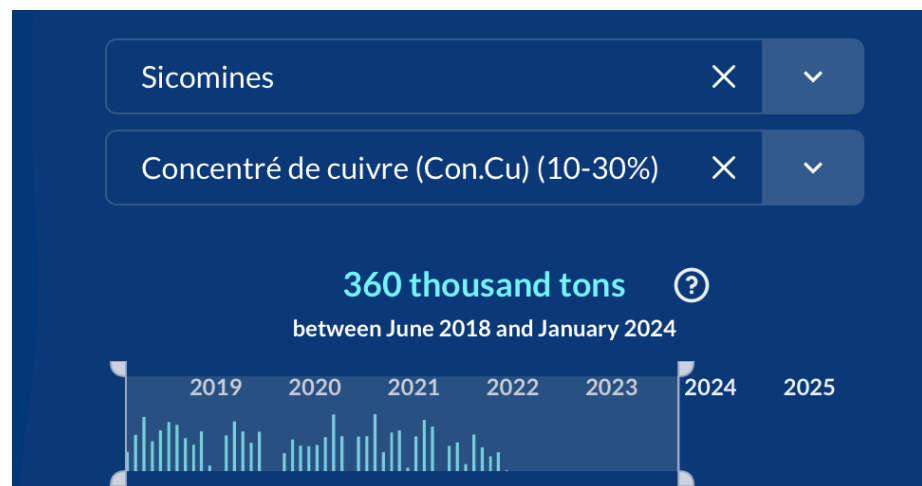
2013	Export ban on concentrates - with a moratorium until the end of 2013 <sup>11</sup>
End of 2013- End of 2016	Annual extension of the moratorium until the end of the following year, citing the energy deficit
2017	Moratorium "until the energy deficit is definitively resolved"
2018	Revision of the Mining Code: under article 342, operators have until March 2021 to undertake mineral processing. This "final" deadline can only be extended by Parliament
2020	The Ministry confirms that the moratorium expires in March 2021 but that exemptions will be granted "on a case-by-case basis"
March 2021	End of legal moratorium but exemptions granted to operators
September 2021	Ministerial order authorising the export of concentrates without even requiring an exemption
August 2023	Reintroduction of the export ban on concentrates, but with the option of obtaining exemptions that are renewable each year

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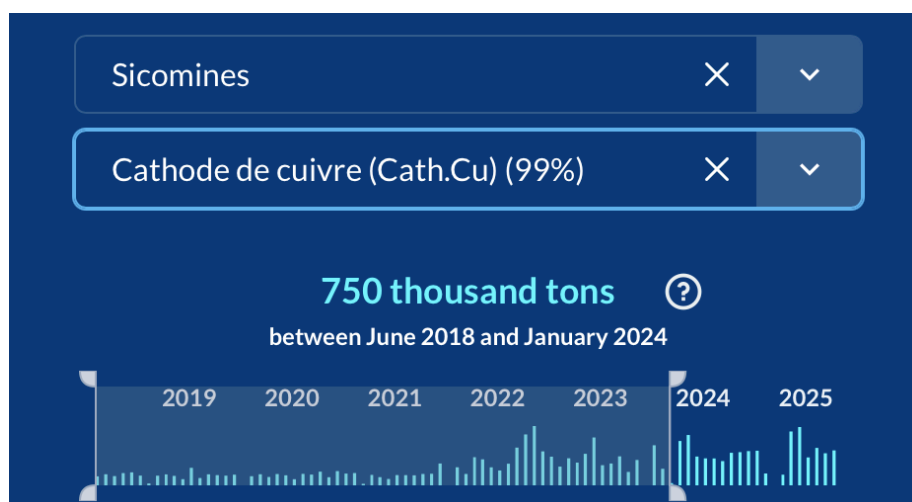
11 MJ Kavanagh, Congo's Government Halts Exports of Copper, Cobalt Concentrates, Bloomberg, <https://www.bloomberg.com/news/articles/2013-04-17/congo-s-government-halts-exports-of-copper-cobalt-concentrates?embedded-checkout=true>; MJ Kavanagh, Congo Minister Delays Copper, Cobalt Concentrate Export Ban, <https://www.bloomberg.com/news/articles/2013-07-11/congo-delays-copper-cobalt-concentrate-export-ban>

Despite this regulatory vagueness and the recurrent exceptions granted, the government's efforts have not been in vain. Almost 80% of the copper exported over the last five years has been in the form of metal, particularly cathodes.

However, a few high-profile cases illustrate the persistence of concentrate exports. The Sino-Congolese mining joint venture (Sicomines), for example, was granted exemptions until 2022, i.e. beyond the legal deadline of March 2021.



Only since the Busanga hydroelectric power station came into operation has Sicomines been exporting exclusively 99% copper metal (cathodes).



Kamoa Copper exported 590,000 tonnes of concentrates in 2023 and plans to continue exporting around 164,000 tonnes per year until 2029 - 11% of its production - while gradually increasing its on-site and toll processing capacity.<sup>12</sup> Ivanhoe, the parent company, has warned its shareholders that the project could be met with an export ban on concentrates at any time, which would significantly affect its export volumes.<sup>13</sup>



<sup>12</sup> OreWin, Kamoa Copper SA, Kamoa-Kaluka Integrated Development Plan 2023, 36, [https://www.ivanhoemines.com/wp-content/uploads/22005kkidp23\\_230316rev1.pdf](https://www.ivanhoemines.com/wp-content/uploads/22005kkidp23_230316rev1.pdf).

<sup>13</sup> Ivanhoe, Annual information form 2023, [https://www.ivanhoemines.com/wp-content/uploads/IVN\\_AIF\\_31-Dec-2023\\_v9a-CLEAN\\_formatted\\_Final\\_FILED.pdf](https://www.ivanhoemines.com/wp-content/uploads/IVN_AIF_31-Dec-2023_v9a-CLEAN_formatted_Final_FILED.pdf)

## **Beyond cathodes: towards a more ambitious industrial policy?**

Local processing must not stop at cathodes, and unlike the case of cobalt, there is little political support for a large copper processing industry. Yet from a technological point of view, the manufacture of copper cables, electrical components and conductive foils used in batteries seems at least as realistic as a cobalt-based battery precursor plant. These industrial sectors, according to a World Bank simulation,<sup>14</sup> have the advantage of being less energy-intensive, which makes them all the more relevant in the Congolese context.

Pioneering initiatives such as Congo Câbles & Transformers in Lubumbashi and Proton CABELEEC in Kinshasa,<sup>15</sup> show that this dynamic is already underway.

For this to spread, close coordination between the Ministries of Mines, Industry, Energy and Technical Education is needed, along with incentives such as tax reliefs, customs facilitation and support for vocational training and innovation.

## **Measures to achieve complete copper processing**

The Congolese experience in the copper sector shows that coercive measures - taxes, bans, deadlines - can produce positive effects when they are applied consistently and sustainably. However, the genuine and comprehensive processing of copper into higher value-added products requires much more: it requires a credible regulatory

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<sup>14</sup> World Bank, Democratic Republic of the Congo, country economic memorandum, case study: mining industry value chain, op.cit. p.9

<sup>15</sup> <https://zoom-eco.net/economie/lubumbashi-paluku-inaugure-une-usine-du-groupe-mes-capable-de-produire-1-million-de-km-de-cables-electriques-par-mois/>

framework applied consistently and impartially, improved institutional coordination and, above all, a real solution to the perpetual energy deficit.

### **Put an end to exemptions for concentrate exports**

The first priority for the Congolese government may be to put a definitive end to the exemptions that still allow the export of copper concentrates. After more than twelve years of successive moratoria, article 342 of the revised Mining Code - which formally bans these exports from March 2021 - should be rigorously applied. At this stage, no one should be able to invoke "regulatory surprise" to avoid the obligation to undertake processing: operators have had all the information they need to comply with it for more than a decade. By removing the exemptions and complying with current legislation, the government would create the conditions for 100% of copper to be processed locally into cathodes.

### **Solve the energy deficit**

This processing can only be achieved if one of the main structural obstacles is removed: the energy deficit. A copper processing industry cannot prosper without access to reliable, sufficient and competitively priced energy. The Congolese government urgently needs to define a strategic energy investment plan, in partnership with the mining provinces, financial backers, mining companies and other private players. Public-private partnerships targeting strategic mining corridors - particularly in Greater Katanga - could help to stabilise the electricity supply for the entire sector over the long term. This aspect is analysed later in this White Paper.

## Improve industrial planning

Another key area is industrial planning. In principle, operating licence holders must produce a processing plan for minerals extracted in the area covered by their licence.<sup>16</sup> During negotiations on the Mining Code, company representatives challenged the inclusion of this provision, arguing that processing was a specific industry that should be separated from the extractive industry, and that such a requirement would go beyond the corporate purpose of a mining company. Despite this resistance, the clause was retained in the final version, reflecting the clear expectations of the Congolese government. However, seven years after the Mining Code was enacted, this provision seems to have become obsolete. Few operators appear to have submitted processing plans, while the government has not required compliance. This area could be strengthened by stricter application of the existing mining code.

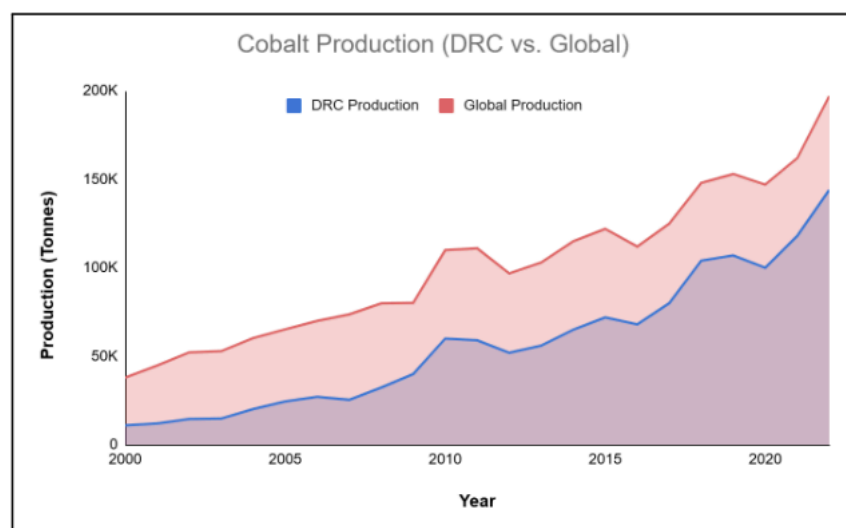
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<sup>16</sup> Article 108 bis of the 2018 Mining Code stipulates that "the holder of a mining exploitation right or a permanent quarry exploitation authorisation is required to process mineral substances into marketable products, or to have them processed, at its own facilities or at approved processing entities established on national territory. Every holder (...) is required to submit to the Mining Directorate its industrialisation plan, containing a programme for processing the mining products extracted from its perimeter at its own facilities or at approved processing entities established on national territory".

# Cobalt: the ambition to produce battery precursors fit for the international market

Although copper is by far the biggest generator of revenue and foreign currency, it is cobalt that attracts the most media attention, partly because of the DRC's prominent position on the international stage.

Cobalt production in the DRC has increased spectacularly over the last twenty years compared with other countries. In absolute terms, Congolese cobalt production has risen from less than 15,000 tonnes of contained cobalt in 2003 to more than 170,000 tonnes in 2023, an 11.5-fold increase. Over the same 20-year period, cobalt production in the rest of the world has not even doubled (x 1.5).



The Democratic Republic of the Congo (DRC) therefore has an unrivalled position on the world market for cobalt, a strategic mineral for the manufacture of rechargeable batteries. In 2024, the country was responsible for almost 80% of global production, a major geological asset that could make the DRC a key player in the global energy transition.

However, added value within its territory remains limited: almost all cobalt is exported in the form of hydroxides, an intermediate product whose processing and industrialisation are dominated by other countries, mainly China.

For several years now, the Congolese authorities have expressed their ambition to move to the next level by attracting investment to the country to produce not only sulphates,<sup>17</sup> but more importantly battery precursors, a decisive step in penetrating global value chains. However, there are major obstacles to achieving this ambition: foreign domination of key stages in the value chain, extreme volatility in cobalt prices, a lack of infrastructure and a regulatory framework that remains inadequate.

This section analyses these challenges, outlines attempts to set up local precursor production, and suggests ways in which the DRC can turn its geological advantage into real industrial leverage.

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<sup>17</sup> Before being used in precursors, the hydroxide is transformed into cobalt sulphates. On the face of it, it would benefit the DRC to at least undertake this next stage of processing. However, there are two disadvantages: the quality of sulphate can deteriorate during transport and its cobalt content is sometimes lower than that of hydroxide, which makes it proportionately more expensive to transport. This explains why the "sulphate" and "precursor" stages are often geographically close to each other.

## **From cobalt hydroxides to battery precursors?**

The main form in which cobalt leaves the DRC is in hydroxides, with a cobalt content of around 28-38%. Hydroxides are only an intermediate stage in the value chain. China controls refining, as well as the production of sulphates, precursors and battery cells, with their refining alone accounting for around 84% of global refined cobalt supply in 2024.<sup>18</sup> It also accounts for a significant proportion of global demand. The DRC's structural dependence on foreign industrial infrastructure severely limits the economic and technological benefits of cobalt mining.

## **The hope raised by the Bloomberg New Energy Finance study (2021)**

Against this backdrop, Bloomberg New Energy Finance (BNEF) published a study in 2021 assessing the feasibility of local production of Nickel-Manganese-Cobalt (NMC) battery precursors.<sup>19</sup> The study concluded that such a project would be potentially competitive in the DRC, compared with alternatives in Poland, China or the United States. Two major factors work in the country's favour: direct access to the raw material (cobalt) and the majority use of hydroelectricity, reducing the carbon footprint of the production chain.

According to BNEF's modelling, a plant with an annual capacity of 10,000 tonnes of precursors would require an investment of USD 39 million, while a 100,000-tonne plant would require an investment of around USD 301 million. Annual input requirements for the latter would be 16,000 tonnes of cobalt, 48,000 tonnes of nickel and 15,000 tonnes of manganese. The

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<sup>18</sup> Darton Commodities Ltd, Cobalt Market Review 2025 - DRC export ban - Market impact, 2025.

<sup>19</sup> Bloomberg New Energy Finance, The Cost of Producing Battery Precursors in the DRC, November 2021, <https://about.bnef.com/blog/producing-battery-materials-in-the-drc-could-lower-supply-chain-emissions-and-add-value-to-the-countrys-cobalt/>

lower cost of land in the DRC, compared with China or Poland, is an advantage, but it is offset by higher operating costs, particularly for electricity and labour.

For the project to be competitive, a number of conditions must be met. Firstly, to reduce costs, the precursor plant will have to be an integrated project, involving partners who already own a cobalt mine and the precursor production technology. In addition, the creation of private electricity infrastructure or public investment are necessary to guarantee affordable and reliable electricity. Finally, financial costs should be reduced to 1-3%, thanks to partner banks investing in the project at these preferential rates. Importing other minerals - manganese and nickel - could pose logistical challenges, although local solutions may be available in the medium to long term.

### **Enthusiasm of Congolese decision-makers**

In November 2021, the Bloomberg study elicited an enthusiastic response from the Congolese authorities. Outside of a [regional forum](#), the DRC signed a [cooperation agreement](#) with Zambia, providing for the creation of a cross-border special economic zone (SEZ) and the establishment of a Congolese Battery Council, which is currently experiencing operational difficulties.

In March 2023, the African Export-Import Bank (Afreximbank) and the United Nations Economic Commission for Africa (UNECA) signed a Framework Agreement with the two countries to establish SEZs dedicated to the production of battery precursors, batteries and, eventually, electric vehicles (BEVs). The Agreement entrusts the implementation of the SEZ to an operating company (OpCo) - bringing together public and private investors, including Afrximbank's FEDA platform.

[ARISE Integrate Industrial Platform](#) (ARISE IIP) has been appointed as technical consultant to carry out the prefeasibility study. It assessed the Kipushi, Kinsevere and Musompo sites, and recommends the latter, located in Kolwezi. The results have not yet been validated or published.

### **A study undermined by the fall in cobalt prices**

It should be noted that the Bloomberg study was carried out at a time when cobalt prices were very high. Cobalt prices reached over \$80,000 per tonne, making it economically justifiable to invest in a precursor plant in the DRC. Since then, market conditions have shifted dramatically. On the one hand, demand has changed, with a rise in cobalt-free LFP (Lithium Iron Phosphate) batteries, which accounted for 27% of the market in 2022, compared with just 6% in 2020. On the other hand, supply has skyrocketed.

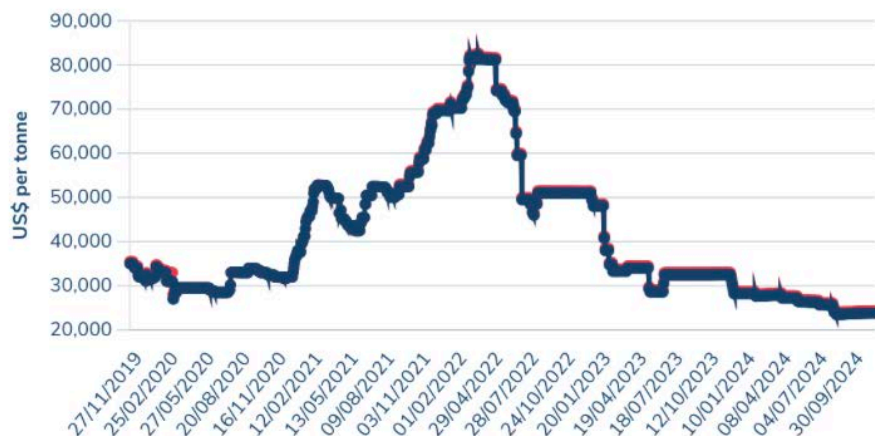
The overproduction is largely attributable to the Chinese company CMOC, active through its Tenke Fungurume and Kisanfu mines. According to the Darton Market Review 2025 for cobalt, CMOC's exports represented half of Congolese exports in 2024.<sup>20</sup>

After a period of more than a year during which exports were blocked due to a dispute with the state company Gécamines, CMOC quickly sold off stockpiles from the Tenke Fungurume operation. At the same time, the Kisanfu project grew spectacularly, adding 32,500 tonnes to global supply and exacerbating the excess of cobalt on the market. On top of this, other operators have announced production increases, totalling an influx of more than 70,000 additional tonnes.

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<sup>20</sup> Darton Commodities Ltd, Cobalt Market Review 2025, 2025.

The result was a sharp fall in prices, from over 80,000 per tonne in March 2022 to less than 24,000 per tonne in November 2024. This slump has affected export earnings, weakened tax revenues and reduced the ability of decentralised territorial entities to finance their activities.



The business model presented by BNEF does not take account of these current conditions. The study's analysis of sensitivity to raw material prices is not detailed enough to determine whether the viability of the project is guaranteed, with a cobalt price three times lower than at the time it was written. At the Cobalt Institute conference in May 2024, the US Undersecretary of Energy denounced the fact that the fall in prices, caused by China Molybdenum's overproduction of cobalt, was directly compromising the ability to compete with Chinese processing plants.<sup>21</sup>

In the meantime, it seems that Zambia are moving forward without the DRC. Zambia's Minister of Trade and Industry has

21 MJ Kavanagh, US Blames China's CMOC for Predatory Tactics Behind Cobalt Glut, May 2024, <https://www.bloomberg.com/news/articles/2024-05-14/us-blames-china-s-cmoc-for-predatory-tactics-behind-cobalt-glut?embedded-checkout=true>

announced that the country has welcomed its first battery production plant in the [Zambia-Jiangxi Multi-facility Economic Zone](#) in the Chibombo district. The first batteries were expected to appear before the end of 2024. By March 2025, it has [produced](#) 45,000 batteries and created over 100 jobs. The project is being carried out in collaboration with the Chinese government.

### **Temporary suspension of cobalt exports: a first step towards regulation**

Faced with falling prices and a lack of control over production, in February 2025 the Congolese government introduced a temporary four-month ban on cobalt exports, which was extended for a further three months the first time, and then again until 15 October 2025 the second time.<sup>22</sup> This second measure established the resumption of exports under a quota system, the practical details of which were set out in decision 005/ARECOMS/2025: quota for the last quarter of 2025 and for the years 2026 and 2027 and the criteria for selecting companies for the quota.

The aim is twofold: to stabilise prices and regain control of commercial flows.

These measures come after the failure of more flexible approaches and are intended to send a clear signal to operators in the sector. However, their effect remains limited if they are not accompanied by a more structured regulatory arsenal and a long-term strategy.

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<sup>22</sup> ARECOMS, Decision n° 001/ARECOMS/2025 of 22 February 2025 concerning the temporary suspension of the export of cobalt from the Democratic Republic of the Congo; ARECOMS, Decision n° 002/ARECOMS/2025 of 22 February 2025 on urgent regulatory measures concerning the cobalt sector; Decision n° 004/ARECOMS/2025

## Measures for effective cobalt processing

For the DRC to be able to process its cobalt locally, particularly into battery precursors, a number of conditions need to be met.

### Including local processing as a criterion in the export quota system

For a precursor plant to be profitable, the price and flow of cobalt also need to be controlled. The DRC will have to analyse the options for increasing its control over cobalt production flows and exports in order to stabilise prices on the international market. However, there are several possible options. Some have already been partially activated, others have not.

One option is to establish precise rules on exports of strategic minerals to anticipate overproduction scenarios, such as the CMOG case mentioned in this section.

Now that the DRC is considering which quota system to implement, it could use criteria that contribute to its policy objectives, such as adding value. It could define minimum entry conditions for participation in the quota system. For example, it could prioritise exports of minerals with the highest metal content. Through a cascade system, lower quality minerals would only be allowed out if all the higher quality products had been exported. This would create upward competition among investors to build local processing facilities.<sup>23</sup>

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<sup>23</sup> Resource Matters, Suspension of Congo's cobalt exports: a short-term solution that requires structural change, April 2025 ([FR Congo's Cobalt export ban - final version - 17.04-8.12.pdf - Google Drive](#))

To achieve this, the government will have to make use of Article 7 bis of the Mining Code, which allows specific rules to be adopted for the access, exploitation and sale of strategic substances. A study could be commissioned on the quota systems used in other areas with high geographical concentration, for example the policies implemented in Indonesia for nickel.

### **Reserving part of mineral production for local industry**

In addition, the project requires various inputs that need to be assembled. For minerals available within the national territory (cobalt and manganese), the Mining Code enshrines in principle the freedom of operators to sell their products on the market. However, both the Mining Code and joint venture contracts allow for exceptions to this rule.

### **Opportunities according to the Mining Code**

However, the revised 2018 mining code grants the Congolese government a major exemption from this principle. The government could activate article 266 of the Mining Code, which gives it the power to determine the proportion of cobalt production to be reserved for the needs of local industry. This article stipulates in particular that "the holder is authorised to export and market its production at the market price, subject to the State's right to determine the proportion of production to be exported according to the needs of local industry".

In application of this provision, article 559 bis of the Mining Regulations stipulates that "the proportion of production that the holder must sell to national industry is determined by interministerial decree of the Ministers of Mines and Industry, taking into account the needs expressed in the Strategic Industrialisation Plan of the Democratic Republic of the Congo".

For the time being, these provisions have barely been used, in the absence of significant demand from local industry. However, the government is currently examining the possibility of supplying two companies operating further along the copper value chain, as discussed in the section on local mineral processing. Plans for the creation of a battery precursor plant are also moving in this direction. In its recent press release on the conditions for obtaining, allocating and executing cobalt export quotas, ARECOMS envisaged a so-called "strategic ARECOMS quota", which is reserved for projects of national importance and will take effect on 1 January 2026.<sup>24</sup> For this measure to be effective, it will have to be in line with the Strategic Industrialisation Plan. This implies structural discussions and actions between the Ministry of Mines, the Ministry of Industry and ARECOMS before January 2026.

### **Opportunities from partnership contracts with state-owned companies**

Another strategy is to negotiate control over the sale of a portion of a joint venture's minerals, a portion corresponding to the state or state-owned company's stake in the project.

In the copper and cobalt sector, this is the strategy that Gécamines has adopted in negotiations with its two Chinese partners, CMOC (Tenke Fungurume) and China Railways (Sicomines). These negotiations resulted in the state-owned company obtaining the right to market 20% and 32% of exports, corresponding to its shares in the two joint ventures.

Through these agreements, the State exercises limited control, insofar as sales revenues are paid back to the joint ventures. In addition, the share marketed represented less than 5%

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<sup>24</sup> Press release no. 2025/005 of 10 October 2025

of global cobalt exports at that point. However, if this trend were to become more widespread, the DRC would be able to temporarily store surplus production to maintain the price of cobalt, and sell it when prices rise.

The same logic can be applied to other sectors, such as copper. In 2018, the revised Mining Code increased the State's direct stake in the share capital of mining companies from 5% to 10%, free of all non-dilutable charges. In the case of the Kamoakakula copper mega-project, the government even managed to negotiate and obtain control of 20% of shares. While controlling a small proportion of Congolese copper production would not influence the international price, it would enable production to be sold at the most strategic time, increasing operators' revenues and therefore tax revenues indirectly.

Strengthening the role of state-owned companies in production sales would require clear guidelines and objective performance indicators that are known to all. Strict standards of transparency, including disclosure of volumes, transaction prices and ore purchasers, must guarantee traceability and public oversight. These indicators and transparency standards would make it possible to limit governance risks.

Furthermore, it will be necessary to identify suppliers of other minerals in the region in order to produce precursors. One way forward for the DRC is to forge strategic partnerships with the countries of the Southern African Development Community (SADC). This is the suggestion of a World Bank study, which encourages the DRC to consider taking advantage of the forthcoming development of South Africa's automotive manufacturing industry to secure continental demand for the DRC's future value-added products in the electric vehicle battery value chain. The possibility of strategic partnerships

with electric vehicle manufacturers and battery producers (e.g. Germany, Kenya) should also be explored.<sup>25</sup>

### **Finalising the creation of a Special Economic Zone (SEZ)**

The BNEF study itself needs to be updated with more realistic price assumptions. At the same time, a structured action plan will need to be drawn up, including:

- A full feasibility study
- A clear incentive framework (tax, customs, energy);
- Effective governance of the SEZ;
- A skills transfer strategy

A special economic zone (SEZ) should be created and in-depth feasibility studies carried out, both for the SEZ and for the plant itself. The Bloomberg NEF study contains assumptions that are not necessarily met at present, and which would benefit from an update given the fall in cobalt prices. The pre-feasibility study carried out by ARISE should be supplemented by a full feasibility study, followed by a tangible action plan.

In addition, under the framework agreement, the Economic Commission for Africa and Afreximbank should lead the creation of an Operating Company (OpCo) in consortium with public and private investors from the DRC and Zambia. It will be necessary to identify companies that have both direct access to a sufficient quantity of cobalt and the expertise required to produce precursors. This significantly limits the number of candidates. It will be necessary not only to form the partnership company that will bring these skills together, but

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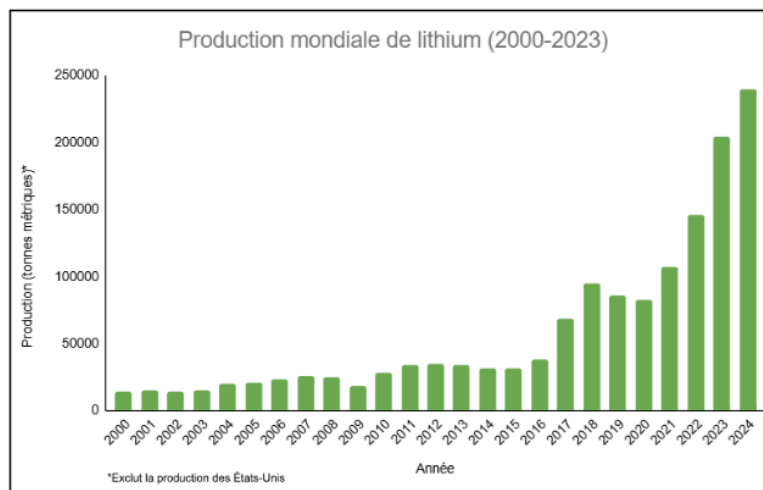
<sup>25</sup> World Bank, Democratic Republic of the Congo, Country Memorandum, access to economic diversification and regional trade integration, fostering economic diversification and regional integration to accelerate growth, job creation and poverty reduction, September 2013, p.13

also to provide for the transfer of these skills to the Congolese partners involved in the project.

The DRC lacks neither the resources nor the partners to process its cobalt locally. But this requires an ambitious, coherent and rigorously applied industrial policy. The precursor plant project cannot succeed without a concerted effort to stabilise the market, secure inputs, guarantee energy and attract experienced investors. By firmly committing to this approach, the country could finally occupy a strategic position in the global battery value chain, turning a geological advantage into a lever for sustainable development.

# Lithium: A missed opportunity to demand more local processing

Until the early 2010s, lithium, a critical mineral in energy transition, was mainly used in low-growth [industrial applications](#), such as glass and ceramics. From 2017 onwards, however, demand has [tripled](#), driven by the rapid development of electric vehicles (EVs) and energy storage systems. Often dubbed the "white gold" of the electrical revolution, global lithium production increased by almost 660% between 2014 and 2024.<sup>26</sup>



**Source: Lithium statistics and information from the U.S. Geological Survey** (<https://docs.google.com/spreadsheets/d/1mnc-OoGbE-hmkJOpkrc0QzSkIXeMNTXgZqwuo3saK9k/edit?usp=sharing>)

<sup>26</sup> According to the USGS Mineral Commodity Summary, global lithium production was estimated at 31,700 metric tonnes in 2014 and 240,000 metric tonnes in 2024, excluding US production. <https://www.usgs.gov/centers/national-minerals-information-center/lithium-statistics-and-information>.

In 2024, Australia remained the world's leading producer, with around 36% of global output, followed by Chile.<sup>27</sup> Commercially, lithium is extracted either from hard rock (spodumene) or brine from salt flats. After extraction, the spodumene is typically heated and filtered to produce lithium hydroxide or carbonate, while the brines are concentrated by solar evaporation to generate lithium carbonate, which is then refined into hydroxide. These two compounds are essential to the manufacture of lithium-ion batteries, which power electric vehicles and renewable energy storage systems.<sup>28</sup>

Current prices range from \$8,000 to \$12,000 per tonne,<sup>29</sup> with projections for a five-fold increase by 2030, with demand expected to triple over the next decade.<sup>30</sup> Against this backdrop of strong global growth, countries with large reserves, such as the DRC, face a dual reality: immense opportunities, but also serious challenges in capturing a greater share of the added value.

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27 Energy Institute, Statistical Review of World Energy. <https://www.energyinst.org/statistical-review>

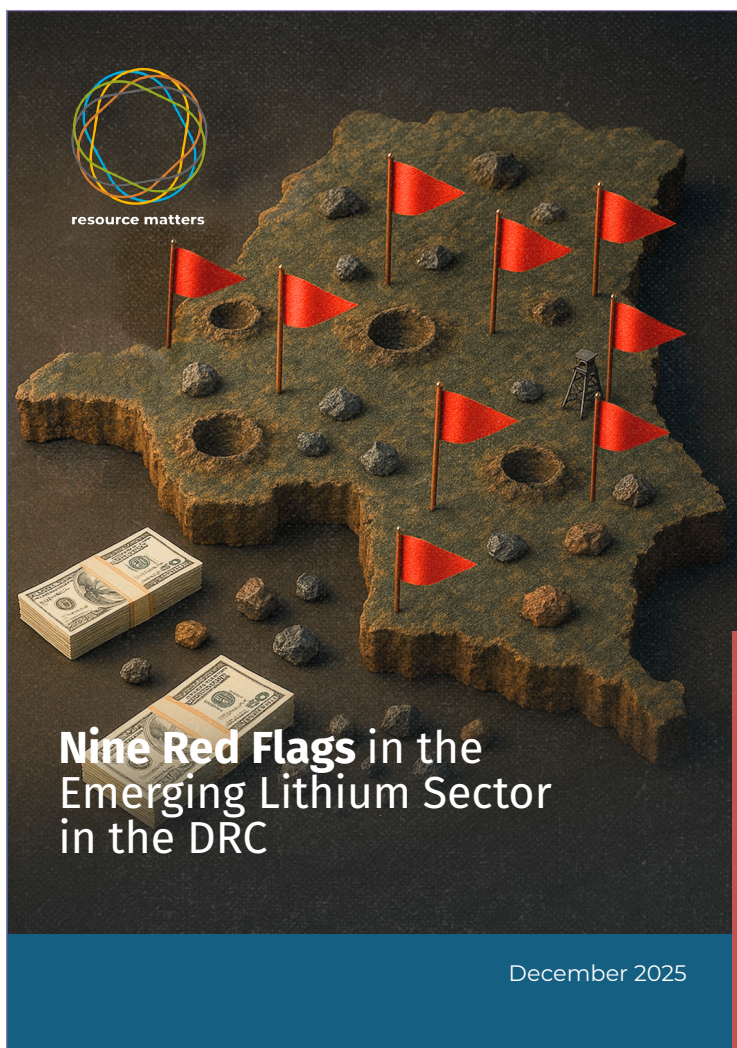
28 Lithium hydroxide is often used in high-capacity batteries with a high nickel content, while lithium carbonate is generally used in lithium iron phosphate (LFP) batteries and smaller electronic devices. <https://inside.lgensol.com/en/2023/06/whats-the-difference-between-lithium-hydroxide-and-lithium-carbonate/>.

29 SMM Metal Market, Latest Update in the SMM Lithium Market. <https://www.metal.com/Lithium>

30 BloombergNEF, Direct Lithium Extraction on the Cusp of Commercialization, May 2024. <https://about.bnef.com/insights/commodities/direct-lithium-extraction-on-the-cusp-of-commercialization/>.

## Rise of the lithium sector in the DRC

Lithium mining in the DRC is still in its infancy, but geological indications point to considerable potential, particularly at Manono in Tanganyika province. A former centre of tin production, Manono is believed to be home to [one of the world's largest lithium deposits](#), attracting the attention of international investors and intensifying competition between local operators, junior companies and multinationals.



Over the past decade, the "rush" for the lithium in Manono has been reminiscent of the rush for copper and cobalt.<sup>31</sup> But, unlike these precedents, Manono offers the DRC a unique opportunity to avoid repeating previous mining patterns. However, the granting of operating licences has been conducted with little transparency and, at times, contrary to the provisions of the revised 2018 Mining Code. In at least two cases, licences were granted without a transparent call for tenders or clear commitments on local added value. In addition, little public information exists on whether the feasibility studies required by law have

<sup>31</sup> Resource Matters, Manono: Nine warning signs in the DRC's budding lithium sector, December 2025 (<https://www.resourcematters.org/post/manono-neuf-signaux-dalerte-dans-le-secteur-naissant-du-lithium-en-rdc>)

actually been carried out and submitted to the Mining Cadastre (CAMI).<sup>32</sup>

The dynamics surrounding these licences and investments are particularly evident in several major projects in the Manono region, which reveal both progress and shortcomings in terms of governance.

### **Manono projects: progress, conflicts and missed opportunities**

- **Southern Manono (Cominière - AVZ Minerals dispute):** Historically, licence PR 13359 covered the entire Manono-Kitotolo project,<sup>33,34</sup> operated by the Dathcom joint venture (AVZ Minerals-Dathomir-Cominière). [AVZ's technical report](#) stated an exploration target of 1 to 1.2 billion tonnes, grading 1.25 to 1.5% Li<sub>2</sub>O, for the entire Manono project. Prior to the administrative demerger in 2023, AVZ had advanced the project considerably, carrying out feasibility studies that foresaw significant investment in mine development, including a processing plant and associated infrastructure, as well as securing substantial offtake contracts with major battery manufacturers and lithium processors.<sup>35</sup>

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32 A feasibility study is a mandatory part of the application for an operating licence, as clearly stated in Articles 69 and 71 of the 2018 Revised Mining Code. <https://www.icnl.org/wp-content/uploads/miningcode.pdf>.

33 The Manono-Kitotolo project is home to one of the world's largest known deposits of spodumene-bearing pegmatite. According to a study by Dewaele et al. (2016), Manono-Kitotolo is the fourth largest lithium pegmatite intrusion identified worldwide. <https://www.sciencedirect.com/science/article/pii/S016913681500181X>

34 Ownership and control of the project have been complicated by ongoing legal disputes, subsequent acquisitions of shares by AVZ, and related arbitration proceedings.

35 AVZ signed binding offtake contracts with major Chinese companies, including GFL International Co, Ltd, Shenzhen Chengxin Lithium Group Co, Ltd and Yibin Tianyi Lithium Industry Co, Ltd, covering more than [80% of the initial production of spodumene concentrate \(SC6\)](#) from the Manono project. Around 30% of this production was intended for GFL, a subsidiary of China's leading lithium producer, Ganfeng Lithium Co. Ltd.

In 2023, following the dissolution of Dathcom, PR 13359 was split: the northern portion was allocated under PR (now PE) 15775 to Manono Lithium SAS (a joint venture between Cominière and Zijin), while the southern portion retained the PR 13359 name under Cominière's responsibility and is now the subject of international arbitration with AVZ. As long as this arbitration remains unresolved and AVZ's participation is not recognised or returned, the development of the southern portion remains effectively suspended. In July 2025, the DRC government signed an agreement with KoBold Metals to jointly develop Southern Manono, making KoBold Kinshasa's preferred partner for relaunching this long-delayed project.<sup>36</sup> However, KoBold's ability to move forward depends entirely on the outcome of the arbitration. These unresolved disputes continue to block commercial development and delay the expected benefits for local communities.

- › **North-Eastern Manono (Zijin Mining - Cominière):** In September 2024, Jinxiang Lithium, a subsidiary of Zijin Mining, through its joint venture Manono Lithium SAS with Cominière, obtained the operating licence [PE 15775](#) covering the north-eastern part of the Manono deposit. Zijin is planning a 5 Mtpa operation with a plant designed to convert spodumene concentrate

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<sup>36</sup> Maxwell Akalaare Adombila, "AVZ Minerals Says Congo Deal with KoBold Breaches Arbitration Order", Reuters, 21 July 2025, <https://www.reuters.com/world/africa/avz-minerals-says-congo-deal-with-kobold-breaches-arbitration-order-2025-07-21/>.

into crude lithium sulphate (95,000 tonnes/year) by 2026, with preparatory work already underway, including camp facilities and a solar power plant.<sup>37</sup> Although this reflects some processing in the country, the focus on intermediate products (crude lithium sulphate) rather than battery-grade lithium carbonate or hydroxide falls short of the government's objective of extensive local value-addition as set out in the Mining Code.

› **Rehabilitation of the Mpiana-Mwanga hydroelectric power station (Zijin Mining):**

Katamba Mining SAS, a joint venture between Zijin and Cominière, holder of exploration licences [PE 12453](#) and [PE 13427](#) located on the periphery of the Manono lithium deposit, has [obtained](#) the contract to rehabilitate the Mpiana-Mwanga hydroelectric power station through a public invitation to tender. The joint venture has invested more than \$80 million to restore the plant and increase its capacity to 40 MW, with an annual electricity production of 186 million kWh.<sup>38</sup> The first turbine was brought into service in December 2024, and the upgraded facility is intended to power not only the mining operation, but also local processing and neighbouring communities.<sup>39</sup>

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37 Zijin Mining Group Co, Ltd, Manono Northeast Lithium Project. <https://www.zijinmining.com/global/program-detail-71798.htm>.

38 Katamba Mining SAS, Congo's Mpiana-Mwanga hydroelectric plant produces renewable electricity for the first time in almost 30 years, 15 December 2024. <https://frycoms.net/wp-content/uploads/2024/12/%E6%96%B0%E9%97%BB%E7%A8%BF-%E6%B3%95%E8%AF%AD%E7%89%88-%E7%AD%BE%E5%AD%97.pdf>

39 The surplus electricity is now fed into the national grid, providing additional supply to the town of [Manono](#) and surrounding local communities.

Although this strengthens the infrastructure base required for local value-addition, questions remain as to whether the existing agreements with AVZ Power are actually being respected and whether these investments will have a real impact on local communities.<sup>40</sup>

› **Manono Tailings (Tantalex Lithium Resources):**

Tantalex has a stake in Minocom Mining SAS, which controls the Manono tailings licence ([PER 13698](#))<sup>41</sup>. Although the company has carried out a [Preliminary Economic Assessment](#) in 2023 and signed an offtake contract with [Glencore](#), it is still in the process of drawing up its Feasibility Study and its Environmental and Social Impact Assessment. The fact that Tantalex indicated in [2023](#) that this work was still in progress, even though the operating licence was granted in 2017, raises concerns about the rigour and transparency of the licence granting process, as well as the consistent application of technical, financial and local value-addition criteria.

These project dynamics illustrate both the potential and the pitfalls of the lithium sector in Manono. Despite the progress made, inconsistencies in the granting of licences, disputes over certain concessions and limited processing requirements

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40 EcoNews, Rehabilitation of the Mpiana-Mwanga power stations: Civil society urges the Government to respect the agreement signed with AVZ POWER SASU, <https://econewsrdc.com/rehabilitation-des-centrales-de-mpiana-mwanga-la-societe-civile-presse-le-gouvernement-a-respecter-laccord-signé-avec-avz-power-sasu/>.

41 Tantalex also owns 70% of United Cominière SAS, which, in October 2022, saw its exploration licences PR 12447 and PR 12448 [converted into operating licences](#) by the DRC Ministry of Mines. These concessions make up the TiTan project, comprising alluvial deposits rich in tin and tantalum, although Tantalex has also reported potential lithium mineralisation in the area.

highlight a persistent difference between the government's industrialisation ambitions and the reality on the ground.<sup>42</sup>

### **Gulf between battery factory ambitions and low local processing requirements**

The DRC government is publicly committed to transforming the country into a regional hub for the production of battery precursors and electric vehicles (EVs) in Africa. At government forums, political dialogues and within international investment frameworks, the authorities have systematically underlined their desire to go beyond the export of raw materials and to ensure that greater value is added to resources within the country.<sup>43</sup>

However, a closer look at the licensing of lithium projects in Manono reveals a persistent gap between these ambitions and the legal and administrative framework currently in force. Operating licences are still frequently granted without any binding local value-addition criteria. In practice, many operators have little or no commitment to downstream processing on Congolese soil.

This disconnect is clearly evident in the contrasting approaches of AVZ, Zijin and Tantalix. Without stronger regulatory enforcement, lithium could follow the same trajectory as the country's copper and cobalt sectors, where large-scale mining has generated export revenues but little industrial diversification.

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42 Resource Matters, Manono: Nine warning signs in the DRC's budding lithium sector, December 2025 (<https://www.resourcematters.org/post/manono-neuf-signaux-dalerte-dans-le-secteur-naissant-du-lithium-en-rdc>)

43 Statements by Congolese authorities expressing the country's ambition to move beyond the export of raw materials and favour the creation of local value have been made at various forums, including the DRC Mining Week 2025 in Lubumbashi ([ACP](#)), the Mining in Motion 2025 Summit in Accra ([Mining Focus Africa](#)), and at the Future Minerals Forum 2025 in Saudi Arabia ([CNBC Africa](#)).

## **Measures to promote local added value in the lithium sector**

The current geopolitical competition around the Manono deposits, given their global strategic importance, offers the government a rare opportunity to capitalise on investor interest. By making local value-addition a mandatory condition for the granting of exploitation rights, the DRC could capture a greater share of the lithium value chain on its territory, while ensuring that energy and infrastructure investments also benefit the surrounding local communities.

### **Make local value-addition a criterion for granting permits**

Operating licences should be awarded through competitive tendering, rather than ad hoc allocations, with local value-addition as a key criterion, alongside financial and technical capacity. Candidates must present a credible plan for processing spodumene into lithium hydroxide or carbonate within the national territory. The proposals must also specify how the processing facilities will be supplied with energy and linked to the transport networks (taking into account the current road conditions in Manono). They must also detail the benefits for local communities, including commitments to skills development programmes enabling Congolese workers to participate in the most advanced stages of the value chain.

### **Tougher requirements for feasibility studies**

The Manono projects highlight a broader governance challenge: operating licences are often granted without rigorous assessment of technical, environmental and financial feasibility. In some cases, companies such as Tantalix have obtained permits without completing an environmental and

social impact assessment, a certified reserve estimate or a bankable feasibility study (BFS). To strengthen transparency and accountability, these studies should be made publicly available after the 10-year period of confidentiality provided for by law<sup>44</sup> and include the following elements:

- Processing facilities: planned capacity, production targets, technology used and commissioning schedule
- Energy strategies: priority given to renewable or low-carbon sources
- Financial models: link between production volumes, retained domestic revenue and benefits for local development

Strengthening the evaluation process, in particular by setting up independent committees made up of technical experts, researchers and representatives of civil society, would enable a more objective assessment of the commitments made by operators.

### **Ensure transparent energy allocation**

The case of the Mpiana-Mwanga hydroelectric power station highlights the risks associated with the opaque allocation of infrastructure. It remains unclear whether the refurbished facility will supply electricity solely to the North-Eastern Manono project or whether it will also supply other operators and surrounding communities. To avoid monopolising this strategic infrastructure:

- All concession contracts for mining-related energy assets must be made public.

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<sup>44</sup> Article 324 of the Mining Code

- Allocation plans must ensure that part of the electricity generated (and not just the surplus) is reserved for community consumption and for other industrial users in the region.
- Any renovation financed by mining operators should be accompanied by binding public service obligations, to ensure that the benefits extend beyond the mining sector.

### **Leverage the current lithium race**

The Manono deposit represents one of the world's largest untapped lithium resources, giving the DRC considerable negotiating power to attract investment. Yet, much of this leverage is lost to fragmented licences, contested permits and uncoordinated investor negotiations.

Faced with strong global demand, the DRC is in a position to be highly selective about its partners. By awarding exploitation rights through competitive tenders, which assess investors not only on their speed to start extraction but also on their commitment to local value-addition, the government can align resource development with its industrialisation programme. Other aspects must also be taken into account, particularly respect for and protection of the environment and human rights.

Incorporating transparent licensing rules, with local processing requirements, co-investment in supporting infrastructure, and benefit sharing with local communities, would enable the DRC to avoid the raw material dependency model seen in its copper and cobalt sectors, while laying the foundations for a national lithium and battery materials industry.

## **2. Achieving local processing:** A strategy spanning the entire value chain

The experience of the copper, cobalt and lithium sectors highlights the need for a tailored strategy to achieve optimum processing of these substances.

Before delving into the potential approaches of such a strategy, the government should first clarify which minerals are covered by the strategy. Careful consideration should be given to whether these minerals should be declared as strategic as specified in the Mining Code, or whether a completely different concept should be used to designate them. On the one hand, the current legal framework offers a great deal of flexibility for adopting tailor-made rules for substances declared to be "strategic". On the other hand, the declaration of a substance as "strategic" automatically entails major fiscal consequences that could affect the profitability of the sector concerned.

Once the scope of the strategy has been clarified, a number of approaches can be explored to stimulate - or even require - local processing along the entire value chain, from exploration to export. At the same time, a real strategy needs to be developed and implemented to overcome the bottleneck that has been preventing a real industrialisation policy for almost 15 years: reducing the energy deficit. These different aspects will be addressed one by one in this part of the White Paper.

## **Which minerals? And to what extent should processing be pursued?**

Many countries have taken clear decisions as to which minerals are a strategic priority (see box). The Democratic Republic of the Congo has not yet defined a list of minerals requiring greater attention in its strategy for key energy transition substances.

On the one hand, there is the concept of "strategic mineral substance". For the moment, only cobalt, coltan and germanium have been classified in this category. However, as this section will show, the fiscal implications of such a designation are onerous and prevent all "important" minerals from being classified as strategic substances.

On the other hand, there are much longer lists of minerals that government experts consider important. These lists vary from one source to another and reflect the fact that there is currently no consensus on priority minerals.

The absence of a structured conceptual framework weakens the scope and coherence of Congolese ambitions. Careful consideration of how to define priority minerals, based on transparent criteria, is required.

## Critical vs. strategic minerals: how other countries make the distinction

Over the last five years, several countries have adopted strategies to better manage the minerals essential to the energy transition. These strategies vary greatly depending on the profile of the country concerned - whether consumer or producer - and its position on international markets.

In this context, the distinction between critical and strategic minerals has become central. While the two concepts are similar, they are not equivalent. Typically, strategic minerals are deemed essential to national sovereignty or the economy, in relation to sectors such as energy, industry, defence and technology. Critical minerals, on the other hand, exhibit particular supply chain vulnerability, due to high geographical concentration, geopolitical risk or lack of alternatives.

High-consumption countries - such as the [United States](#), the [European Union](#) or the [United Kingdom](#) - are focusing their strategies on critical minerals, which are often not produced locally. Their priority is to secure supply chains for minerals whose disruption could have systemic effects on their economies.

Producer countries, on the other hand, tend to structure their thinking around minerals deemed strategic for their own development. These may be minerals intended for export, but which generate significant budgetary income, or resources used as a basis for local industrialisation.

[Argentina](#) makes a particularly clear distinction between the two concepts. Critical minerals are those that the country does not produce, but which are essential to its economy - for example, phosphorus, which is vital for agriculture. Minerals of strategic economic importance, on the other hand, are

mined domestically and are seen as drivers of development, contributing to employment, tax revenues and the regional economy.

Some countries, such as [Australia](#) and Canada, adopt a mixed approach. Their strategies aim to meet both the needs of the global market (energy transition, digital, medical, defence) and internal industrial priorities. Canada has defined a [list of 31 critical minerals](#) extracted locally, and intends to become a key supplier on a global scale.

Other countries focus on specific sectors. Zambia has [developed a strategy exclusively dedicated to copper](#) aimed at tripling its production to 3 million tonnes by 2031. Chile, the world's leading copper producer, has focused on [lithium](#), which it considers to be more strategic for the immediate future of its energy policy.

Finally, Ghana is linking its mining strategy to a long-term energy strategy. Its [national framework for energy transition 2022-2070](#) provides for both a gradual phase-out of oil and a focus on [critical minerals](#), taking into account climate and development issues.

These examples show that there is no single model. Each country adapts the definition and selection of its strategic and critical minerals to its own objectives. It is recommended that the DRC adopt a similar approach by clearly defining its criteria, its priorities and its national list, rather than allowing itself to be guided primarily by the international economy or the needs of other countries.

## Contrasting lists of minerals

The multi-disciplinary experts consulted for this White Paper propose lists of minerals that take account of both international dynamics and domestic needs, in particular national industrial development and the country's strategic interests.

Some experts propose an extended list including copper, cobalt, lithium, germanium, the 3Ts (tin, tungsten, tantalum), zinc, manganese, rare earths, iron, graphite, nickel and chromium.

More recently, the Congo National Geological Service (SGN-C) proposed a list of minerals deemed essential to the energy transition: copper, lithium, cobalt, nickel, gallium, tungsten, platinum, palladium, fluorine, graphite and rare earths.<sup>45</sup>

At the forum organised by Resource Matters in Kinshasa, a number of experts stressed the importance of prioritising minerals with certified or proven reserves, rather than blindly copying international lists of so-called "essential" minerals for the energy transition. This could lead to a much more targeted approach to a small group of minerals. By way of comparison, Chile has a strategy exclusively for its lithium and Zambia has the same for copper.

Be that as it may, the differences between the experts show that there is still work to be done to clarify the priority minerals to be included in a coherent national strategy and the criteria on which they have been selected.

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<sup>45</sup> Congo National Geological Service, Adelard Joël NGOY, Deputy Director-General for Research and Value-Addition of Energy Transition Metals, Presentation at the EITI workshop, Kinshasa, 5 November 2024.

By way of example, these criteria may include:

- The most important minerals for the international energy transition
- Minerals "threatened" by substitution for other minerals and whose strategic position must be preserved
- Minerals of which the DRC has particularly large reserves compared with other countries
- Minerals of particular importance to the country's economy and tax revenues
- Minerals for which future international demand is certain
- Minerals for which local added value is easiest to achieve in the current context

For each of the minerals selected on the basis of one or more of these criteria, more precise and quantified indicators could be adopted with regard to added value. For example, the government could set itself the target of achieving 100% refined copper production and 100,000 tonnes of copper cables by 11 July 2027 to mark the 25th anniversary of the 2002 mining code.

## **“Strategic mineral substances” in the Mining Code**

The Mining Code already provides for the concept of "strategic mineral substance". Should all the minerals selected for the strategy be designated as strategic mineral substances as defined by the Mining Code?

There is no simple answer. On the one hand, the definition in the Code does not necessarily correspond to the definition of minerals in the government's strategy. In addition, designating a substance as strategic has significant fiscal consequences which limit its usefulness. But it also offers great opportunities in terms of regulatory flexibility.

### **A definition in need of revision?**

Under the law, strategic mineral substance means "any mineral substance which, depending on the international economic situation at the time, in the Government's estimation, is of particular interest in terms of its critical nature and geostrategic context". Article 7 bis of the same code states that "if the national or international economic situation so permits, the Prime Minister may, by decree deliberated in the Council of Ministers, on the advice of the sectoral ministers concerned, declare certain mineral substances to be strategic substances".

The concept of "strategic substance" in the Mining Code is based mainly on external factors, including soaring international prices, supply shortages abroad and geopolitical competition.

The provisions relating to strategic substances have only been activated once, when in November 2018, the Prime Minister declared cobalt, coltan and germanium as such.<sup>46</sup> According to the decree, this decision was motivated by the use of these substances in numerous technologies and by the international economic situation at the time.

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<sup>46</sup> Prime Minister, [Decree n° 18/042](#) of 24 November 2018 declaring cobalt, germanium and columbite-tantalite "coltan" as strategic mineral substances.

The definition seems to overlook other national considerations, such as the needs of local industry, the importance of a particular sector for the state budget, and even security issues for the DRC.

Thus, if the list of minerals in the strategy has been drawn up on the basis of internal criteria, such as the importance of a sector for the country's tax revenues, the definition in the mining code will not be appropriate. Consideration should therefore be given to amending the mining code so that the definition of "strategic" corresponds to what is crucial for the DRC, rather than for third countries. The DRC could, for example, consider a broader definition, combining global demand, criticality, economic issues and national priorities.

### **Tax provisions to be amended?**

Apart from the definition, it is the fiscal consequences that pose the biggest challenge.

The only immediate consequence of classifying a mineral substance as strategic is a significant increase in the taxation applicable to the concerned sector. Under Article 241 of the Mining Code revised in 2018, the mining royalty for strategic substances automatically increases to 10% of turnover - compared with a rate of 0% to 3.5% for non-strategic minerals.

Such a high level of taxation can compromise the profitability of certain projects, especially if prices fall on international markets. [A study by the Natural Resource Governance Institute](#) (NRGI) estimated that this 10% levy could raise the Average Effective Tax Rate (AETR) to 72%, even in optimistic price scenarios for copper and cobalt.<sup>47</sup> For other minerals with lower margins, such as iron or nickel - often located in landlocked areas requiring heavy investment in infrastructure - such taxation would make extraction economically unviable.

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<sup>47</sup> Thomas Lassourd, Taxation in the DRC's new Mining Code, NRGI, Analysis, November 2018

In view of this, one possible approach for the DRC would be to adopt a sliding royalty rate, adjustable according to market fluctuations and its impact on the AETR. This mechanism would make it possible to increase the royalty when prices are high, while reducing it when prices fall. This is the approach taken by Chile in its strategic lithium contracts, particularly with SQM and Albemarle.

However, implementing this reform would require amending the Mining Code, with the usual risks of political deadlock. But it would also offer an opportunity to facilitate the classification of a mineral substance as strategic, without penalising the profitability of its exploitation.

In the absence of legislative reform, another option would be to use a non-legal concept to identify the minerals that should be prioritised by the government. In this case, the national strategy's measures should remain limited to the non-regulatory aspects: better supervision, mobilisation of funding, or political support measures.

### **Regulatory flexibility**

At the same time, classification as "strategic" gives the government a great deal of flexibility to adopt specific measures to promote local processing.

The Mining Code stipulates that the "access, exploration, exploitation and sale of strategic substances are governed by specific regulatory provisions". This gives the government considerable leeway to establish specific rules for these substances, in line with the objectives of a targeted national strategy.

A concrete example is the package of ARECOMS measures adopted in February 2025 to suspend cobalt exports and

regulate the sector. Such regulatory interventions could not have been legally adopted if cobalt had not previously been declared strategic. At the same time, this flexibility must be used sparingly to avoid an overly uncertain legal climate.

In short, a great deal of thought needs to be given to drawing up the list of minerals included in the strategy, considering whether the definition of strategic substances in the mining code and its fiscal consequences should be reviewed, and assessing the extent to which regulatory flexibility is required to achieve the desired objective: increased added value.

## Exploration phase: Strengthening geological knowledge of strategic minerals

Regardless of the specific minerals included in the strategy, requirements and incentives for local processing should be found throughout the value chain.

At the moment, the media are focusing almost exclusively on the idea of setting up a battery (precursor) factory. However, a single pilot project will not generate benefits on a scale that will have an impact on the national economy. For example, the precursor plant proposed by Bloomberg NEF in 2021 represents an investment of only \$39 million. By way of comparison, in the same year, CMOC announced an investment of [\\$2.5 billion](#) to double copper and cobalt production at Tenke Fungurume Mining.

If local processing is to become a reality in the DRC, it will not be enough simply to demand high content levels when products leave the country. Upstream, strong signals must already be given that projects with high added value will receive preferential treatment, and that other projects may be subject to processing requirements imposed by the government. This starts at the exploration stage, followed by the granting of operating licences, the supervision of processing plans, and finally exportation.

The exceptional wealth of the Congolese subsoil is as well known as it is poorly documented. According to the National Geological Survey, the country has eleven mining sectors that are essential to the energy transition: copper, lithium, cobalt, nickel, gallium, tungsten, platinum, palladium, fluorine,

graphite and rare earths.<sup>48</sup> To this list, the International Energy Agency adds [other minerals](#) present in the DRC that can also be considered "critical": tin, tantalum and germanium.<sup>49</sup>

Today, there is still a major lack of information: exploration has only covered 19% of the country's mining potential.<sup>50</sup> Even in Katanga, where copper-cobalt activity is most intense, the cumulative thickness of mineralised layers remains unknown at provincial level.<sup>51</sup> Official statistics on mining reserves often date back several decades and are not systematically updated.

## **Adapting geological policy to the long-term outlooks and mining activity already underway**

As mentioned, the Congo needs to think strategically about which minerals to prioritise in its strategy. Exploring and certifying new reserves takes time - often more than a decade - and therefore requires long-term planning. Furthermore, these activities are very expensive. It is crucial to concentrate efforts on the substances identified as priorities for their strategic value. This implies a differentiated approach:

- For minerals that are still poorly documented in Congolese subsoil (lithium, germanium, nickel, manganese, tantalum), the government could

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48 Congo National Geological Service, Adelard Joël NGOY, Deputy Director-General for Research and Value-Addition of Energy Transition Metals, Presentation at the EITI workshop, Kinshasa, 5 November 2024.

49 International Energy Agency, Final List of Critical Minerals 2022, updated in April 2025

50 African Mining Development Center, Assessment report on the governance approaches and initiatives of the Democratic Republic of the Congo regarding the sustainable management of mining resources and alignment with the African Mining Vision, June 2024, 31 (hereinafter "AMDC, Assessment Report Sustainable Management of Mining Resources, June 2024").

51 AMDC, Assessment Report Sustainable Management of Mining Resources, April 2024, 31.

concentrate its own public investment to stimulate exploration.

- For minerals already mined by numerous private operators (copper, cobalt), the challenge is to impose stricter requirements for the transmission and storage of data and samples from exploration work carried out by investors.

### **Financing research with own funds: uncertain results**

The Mining Code explicitly entrusts the State, through specialised bodies, with the task of undertaking soil and subsoil investigative activities to improve geological knowledge and promote scientific information. The Congo National Geological Service (SGN-C), created in 2017, is responsible for this mission throughout the country.

In 2022, the DRC adopted a National Strategic Plan for the Exploration and Certification of Mineral Reserves. It aims to acquire and centralise geoscientific data, identify new mineral occurrences, discover deposits, and estimate and certify resources.

These ambitions were confirmed in October 2024 by [the minister of Mines](#). He announced a roadmap including an external audit and consultation with key players in the sector to ensure transparency and responsible management of the reserves. However, it is not specified whether this initiative is aimed solely at reserves held by state-owned companies, those in the unallocated public domain, or both.

In practice, the exploration results are slow to materialise. In 2017, the DRC signed a contract with Spanish company Xcalibur for airborne geophysical and geological mapping of the country, with a particular focus on the provinces of Equateur,

Kasai and an area of Haut-Katanga. The first phase alone would have cost a maximum of \$105 million, since revised to a maximum of \$61 million. The concrete results of this project have not yet been disclosed, although it would appear that some of the money has been paid out.<sup>52</sup>

A potential source of public funding for this work is the Mining Fund for Future Generations (FOMIN). One of FOMIN's main missions is to finance, in whole or in part, mining research projects through the SGN-C.<sup>53</sup> Since its creation by the 2018 legislative revision, funds allocated to FOMIN were expected to exceed 450 million.<sup>54</sup>

However, there is currently no public information available on any potential FOMIN funding for the SGN-C action plan or other geological research activities. At the end of the forum organised by Resource Matters on the management of strategic minerals, it emerged that the terms and conditions for the funding of SGN-C by FOMIN are not specific enough in the decree which created FOMIN. According to the civil society, in particular the [CREFDL](#) (Centre for Research on Public Finance and Local Development) in its April 2025 analysis of [revenues generated by the extractive sector](#), part of the problem is that

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52 See art. 19 of the 2017 RDC-XCalibur Contract. The maximum amount was then revised downwards (max. 61 million dollars - See amendment 1 to the RDC-XCalibur Contract dated 23 August 2019 available at <https://resourcecontracts.org/contract/ocds-591adf-3744711927/view#/pdf>).

53 Article 2 of Decree no. 23/05 of 20 February 2023 amending and supplementing Decree no. 19/17 of 25 November 2019 on the status, organisation and operation of FOMIN.

54 Due to the delay in establishing and making operational the Mining Fund and the unavailability of EITI data in recent years, no official statistics are currently available on the funds actually collected by FOMIN. The figure of “at least 400 million” is based on declarations of mining royalty statistics by the Mining Divisions of Haut-Katanga, Lualaba and Kibali. Additionally, [the Congolese press](#) reports revenue of 250 million in a year and a half, although no source is given.

FOMIN's budget is drained by the general treasury, rather than being used for the more specific objectives set out in the law.<sup>55</sup>

Pending FOMIN disbursements, the SGN-C's main financial resource remains the 2% share of royalties collected as remuneration for services rendered in connection with the export of mining products. These revenues are mainly allocated to the SGN-C's operating costs, rather than to prospecting activities as such.

One concrete option is therefore to establish clear and transparent collaboration between FOMIN and the SGN-C in order to carry out geological research, the results of which would be used to organise calls for tender to attract new investors.

### **Gaining better control over private operators' exploration results**

A second way of enhancing geological knowledge would be to set up a more robust system for capitalising on the much more detailed geological information collected by the mining operators themselves.

Mining operators must formally communicate their prospecting and exploration results at several stages in the process:

- **Prospecting:** Those carrying out geophysical surveys and geochemical prospecting campaigns must report the results to the Geology Department (art. 5 bis, revised Mining Code)
- **Exploration:** Mining titleholders carrying out exploration work must make a prior declaration; the

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<sup>55</sup> CREFDL, in DRC, Assessing the credibility and transparency of extractive sector revenues, April 2025

competent officials of the Geology Department must have free access to all drill holes and other work, and may ask to be given samples and any other geological documents (art. 5bis, revised Mining Code).

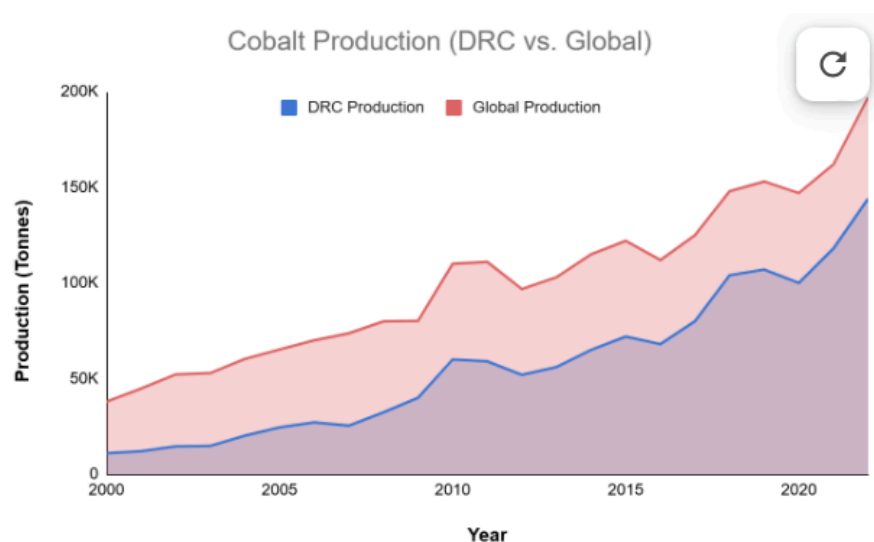
- Exploration licence: When renewing an exploration licence, licence holders must submit detailed reports on both the results obtained and the exploration planned.
- Operating licence: When applying for an operating licence, the licence holder must submit an exploration results report regarding the nature, quality, volume and geographical location of the mineral resource identified (art. 127 of the revised Mining Regulations)

The data submitted by the operating licence holders must remain confidential for 10 years. During the confidentiality period, the data collected should enable the State to build up a more detailed knowledge of the subsoil.

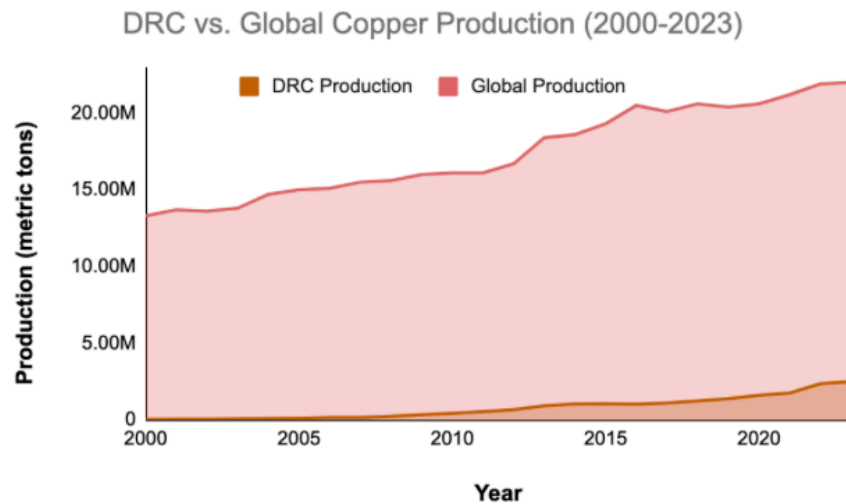
The current documentation system is weak and the national database virtually non-existent. The Ministry of Mines should assess the institutional, operational and technical capacities of SGN-C in order to ensure ongoing supervision of compliance of mining operators with the above provisions, and systematic analysis of the data received. Specific expertise is needed to store and process this information in an up-to-date database capable of informing national strategy and enhancing the value of strategic minerals in international negotiations. The certification plan could even extend to reserves declared by companies, in accordance with the Mining Code.

## Production phase: integrating mining and energy planning into the granting of operating licences

As a reminder, over the last twenty years, the Democratic Republic of the Congo (DRC) has seen spectacular growth in its mining production, particularly in the copper and cobalt sectors, two key resources in the global energy transition. Between 2003 and 2023, cobalt production, which was less than 15,000 tonnes, increased more than tenfold, while global production only increased by half.



This growth has been even more pronounced for copper, which increased more than forty-fold in the same 10-year period, from 60,000 tonnes in 2003 to 2.5 million tonnes in 2023, representing 11% of world production in 2013 compared with 0.4% in 2003.



This rise in power has placed the country in a major strategic position on world markets. But this global influence has not yet translated into significant local industrialisation, with almost all the copper and cobalt exported in semi-processed form (hydroxides). Regaining control over the volumes produced and the way they are marketed must therefore serve a central objective: to ensure that mining resources primarily supply local processing industries, reducing vulnerability to global price cycles.

### **Using value-added criterion when granting mining permits**

The granting of an operating licence is a key stage in the development of a mine site. It is at this stage that investors must submit their feasibility study and prove that they can operate a mining project profitably and sustainably. For the moment, however, analysis of feasibility studies and the ambitions of the investor-candidate is not always carried out with the necessary rigour to achieve advanced local processing.

### **Strengthening the analysis of feasibility studies**

The feasibility study approval process must become a central tool for regulating production and promoting local added value. At present, there is no database consolidating production forecasts for all projects, and the authorities do not compare these data with international market prospects. The creation of such a database would make it possible to adjust the granting of licences according to the risks of overproduction.

But beyond this quantitative aspect, the assessment of feasibility studies should include a qualitative analysis of the degree and mechanisms of proposed local processing. Projects incorporating second or third stage processing (e.g. cathodes or precursors) should be given preferential treatment. Setting up independent juries, bringing together technical experts, academics and civil society, would strengthen the credibility and transparency of this process. The publication of studies following the end of their confidentiality period would also contribute to greater public accountability.

### **Ensuring geopolitical balance to avoid excessive dependence on a single geopolitical bloc**

The profile of mining operators active in the Congo has changed dramatically in the space of 30 years. Gradually, Chinese investors have become dominant in the Congolese mining sector, thanks to massive investment and almost total control of the processing of strategic minerals such as cobalt. Chinese companies enjoy a major competitive advantage due to their access to capital, their technological mastery and their vertical integration, which makes it very difficult for the DRC - or any other country - to develop its own local processing industry.

This domination has a direct impact on the global market. China controls more than 70% of cobalt production and almost

80% of cobalt refining, a monopoly that has contributed to the collapse of cobalt prices. These crises have made it unprofitable to process cobalt in the DRC, despite the country's significant reserves, reinforcing the country's dependence on foreign players.

To reverse this trend, the DRC must pursue an active policy of granting mining licences. It is essential for the government to make the local processing of minerals a mandatory criterion in the award of mining titles. This requirement must be translated into transparent and rigorous calls for tender, especially for highly coveted sites such as Manono Kitotolo, where the granting of permits has often been influenced by [dubious political connections](#) rather than solid industrial commitments.<sup>56</sup>

By reinforcing its requirements in this way, the DRC would finally be able to develop a genuine local mining industry, create jobs and develop its resources while respecting its economic and environmental sovereignty.

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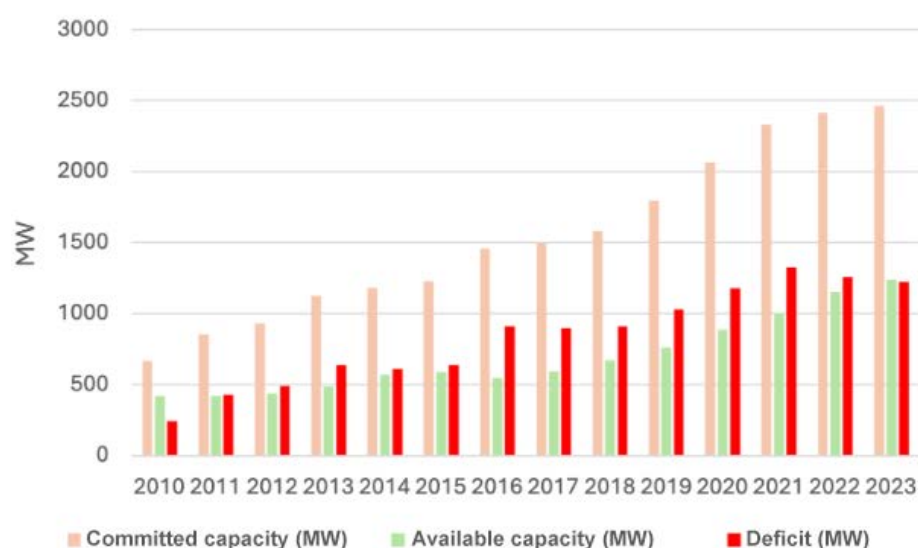
<sup>56</sup> Resource Matters, Nine warning signs in the DRC's budding lithium sector, December 2025 ([https://drive.google.com/file/d/1UZcFwwFTzQQ\\_WkZIBdV\\_rqkkR8uAyRWe/view](https://drive.google.com/file/d/1UZcFwwFTzQQ_WkZIBdV_rqkkR8uAyRWe/view))

## Tackling the energy deficit

The first part of this White Paper highlighted one of the biggest bottlenecks preventing local processing: the energy deficit.

Mining, the economic mainstay of the Democratic Republic of the Congo (DRC), is the country's main source of electricity demand. According to the African Development Bank, 85% of the country's electricity production is absorbed by industry, particularly mining.

However, the sector is facing a structural energy deficit which is hampering its competitiveness and compromising local processing ambitions. The National Electricity Society (SNEL) estimates that the mining sector alone requires at least 1,000 MW more than it can supply.



**Source: SNEL presentation at the Conference on Energy in the DRC**

For more than a decade, this deficit has been one of the major concerns of the Chamber of Mines, often cited to justify the

difficulties in increasing local processing of minerals. Neither the government nor the operators have yet defined a clear strategy in the short, medium or long term to remedy the situation.

## **Energy deficit and challenges for the Congolese mining sector**

Four main sources currently supply the industrial mining sector: electricity from SNEL, imports, diesel generators and, to a lesser extent, new hydroelectric and solar capacity.

SNEL is a historical supplier, with infrastructure built either during the colonial period (Katanga sites) or under Mobutu (Inga I and II). These facilities have suffered from a chronic lack of maintenance. Since the sector was liberalised, some mining companies have financed major refurbishments - often in the form of loans repaid through electricity bills - in exchange for guaranteed supplies. Tenke Fungurume Mining (TFM) has invested \$140-200 million in Nseke,<sup>57</sup> Kamoto Copper Company and Mutanda have injected \$450 million into Inga II (groups G27-G28) and the HT network,<sup>58</sup> and Kamoakakula financed the upgrading of Inga G25 and Mwadingusha to the tune of \$450 million.<sup>59</sup>

This supply is invoiced at historically low rates, sometimes below the cost of production: 5.69 US cents/kWh for years,<sup>60</sup> raised to 14

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57 [https://www.mediacongo.net/publireportage-reportage-6124\\_projet\\_nseke\\_fruit\\_du\\_partenariat\\_entre\\_la\\_snel\\_et\\_tfm.html](https://www.mediacongo.net/publireportage-reportage-6124_projet_nseke_fruit_du_partenariat_entre_la_snel_et_tfm.html)

58 <https://www.forumdesas.net/2021/12/glencore-rdc-investit-plus-de-450-millions-usd-dans-le-projet-fript-avec-la-snel/>

59 Ivanhoe, News Release January 2024, <https://www.ivanhoemines.com/news-stories/news-release/ivanhoe-mines-provides-2023-production-results-and-2024-production-guidance-for-the-kamoakakula-copper-complex/>

60 SNEL, SNEL Pricing, 23 February 2016.

cents recently. But delivery remains unstable. According to SNEL, it meets only half the needs of its mining customers, a deficit that has worsened since 2016. Growing demand threatens to widen this gap still further.

The current model weakens SNEL's finances: repayments in kind reduce its cash flow, limiting its ability to invest in new production and distribution capacity. In addition, the electricity supply rehabilitated through these partnerships is often "allocated" to the mining operators concerned, to the detriment of other consumers, including domestic consumers.

To make up the shortfall, some companies import electricity via the DRC-Zambia interconnector (220 kV Kasumbalesa-Luano). This option is vulnerable to seasonal shortages in Zambia, which have led to local criticism of these exports.

The widespread use of generators is another "solution", reliable but costly and polluting. One major operator has installed more than 120 MW of thermal capacity on site.<sup>61</sup> Operating costs are high: between three and four times those of SNEL.<sup>62</sup> The sector's annual fuel bill is estimated at between USD 500 and USD 600 million.<sup>63</sup>

This dependence on fossil fuels is paradoxical, given that the DRC supplies the world with minerals that are essential to the energy transition.

A few hydroelectric and solar projects are emerging, but remain marginal. Kibali Gold Mines has developed several

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61 Kamoakakula, Integrated Development Plan 2023, 469, [https://www.ivanhoemines.com/wp-content/uploads/22005kkidp23\\_230316rev1.pdf](https://www.ivanhoemines.com/wp-content/uploads/22005kkidp23_230316rev1.pdf)

62 <https://www.innogenceconsulting.com/post/crise-%C3%A9nerg%C3%A9tique-actuelle-en-rdc-pistes-de-sortie>

63 <https://zoom-eco.net/finance/rdc-la-snel-privee-de-4-milliards-usd-dans-le-secteur-minier-en-5-ans/>

small and medium-sized hydroelectric power stations in Haut-Uélé. The Busanga power station (240 MW), launched by Sicohydro/Sicomines with Gécamines and SNEL, is designed to supply Sicomines but has been criticised for its limited local impact. In 2024, CMOC announced Nzilo II, a 200 MW hybrid hydro-solar site for its subsidiaries TFM and Kisanfu, with no indication that it would be shared with the local population.<sup>64</sup> Projects such as Sombwe (hydro + solar, Kipay) and Tembo Power are awaiting financing and power purchase agreements.

Despite the fall in technological costs, operators cite country risk, financing difficulties and administrative red tape as obstacles to the development of these projects. In the meantime, diesel generators remain the back-up solution.

### **Government responses and limitations**

The 2021 Industrialization Plan includes ambitious targets: the production of copper cables, electrical machines and cobalt-based precursors. It stresses that "the availability of energy and transport routes" is a prerequisite, but does not specify how this is to be achieved.<sup>65</sup> The recently appointed Energy Minister has acknowledged the absence of sectoral planning and is proposing to develop nine sites, generating 2,500 MW. However, the National Energy Compact 2024 and the draft National Energy Policy remain vague on the mining sector, reducing it to a debt burden for SNEL.

Mega-projects such as Inga III (costing more than USD 15 billion) are attracting a lot of attention, but their timeframe for completion - at least a decade - makes them unsuitable

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<sup>64</sup> [https://en.cmoc.com/html/2024/News\\_0701/69.html](https://en.cmoc.com/html/2024/News_0701/69.html)

<sup>65</sup> <https://www.deskeco.com/2024/07/19/energie-le-ministre-teddy-lwamba-ambitionne-de-developper-9-sites-pour-produire-2500-mw-necessaires>

for rapidly absorbing the deficit. In the short term, only a coordinated increase in generation capacity, incorporating accelerated refurbishment of existing sites, deployment of renewable projects and improved regional interconnection, could close the gap.

The energy issue is not just a supply problem: it determines the DRC's ability to capture more added value. Local copper and cobalt processing projects - production of cathodes, battery precursors or finished products such as cables - require a stable and competitive supply of electricity. There are a number of possible solutions to solve this issue.

### **Planning electrification in the short, medium and long term**

The first step to solving the energy deficit is rigorous strategic planning. This must include all energy demands, not just those of the mines, but also those of SMEs, households and social services. This approach will avoid conflicts of use between the various stakeholders.

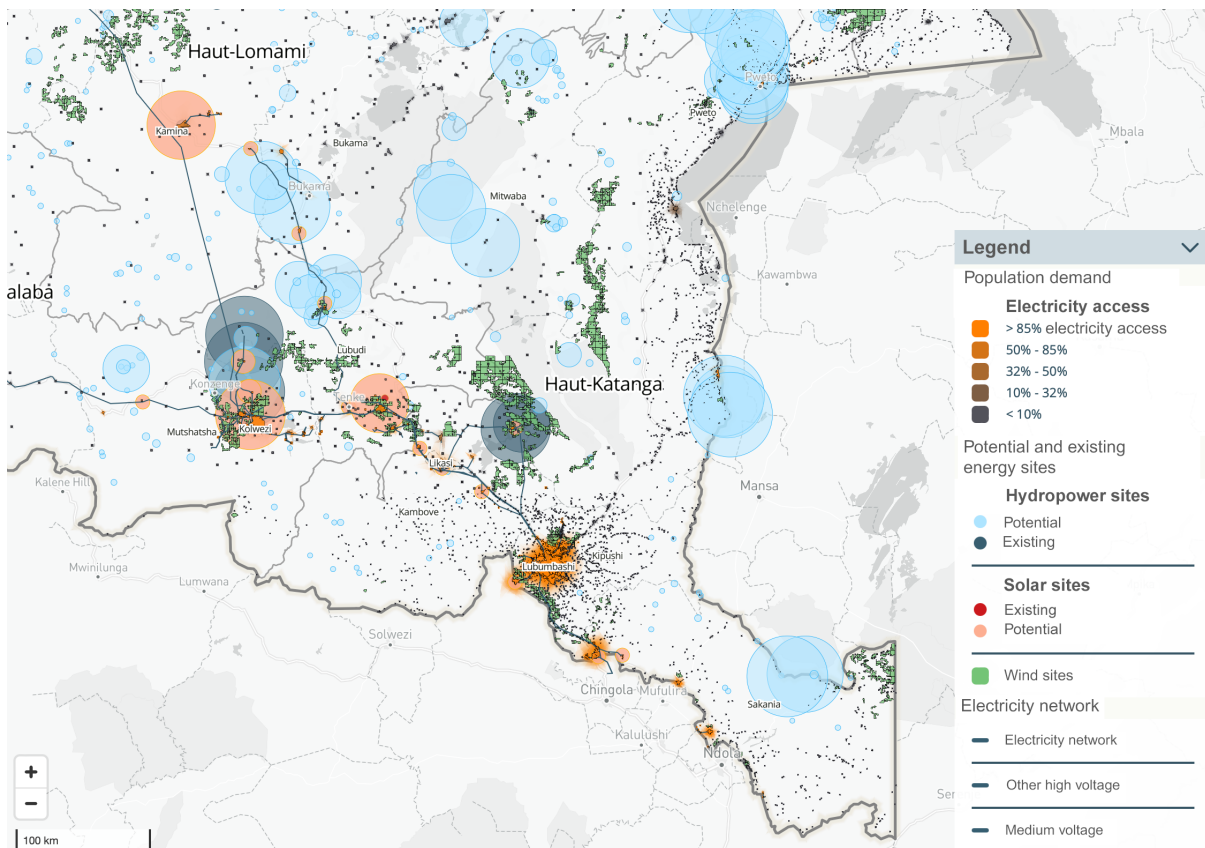
The Electricity Regulation Agency (ERA) was planning to carry out an assessment of supply and demand in the mining sector. Initiated in 2023, this crucial study remains unavailable to this day, apparently due to difficulties in accessing information from operators.<sup>66</sup> However, the Ministry of Mines has a wealth of data, including feasibility studies which, combined with close collaboration with the ERA, would provide a clear picture of energy needs.

It is also essential to exploit the DRC's as yet untapped energy potential. Several dozen hydroelectric and solar power sites

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<sup>66</sup> Agence de Régulation du secteur de l'électricité (ARE), Annual Report 2023.

close to mining areas could help to reduce the deficit. The [Congo Epela](https://congoepela.resourcematters.org/en) map, developed by Resource Matters, shows this still poorly documented potential. The DRC would benefit from giving priority to the development of small and medium-sized hydroelectric and solar power plants, which are quicker to implement than major projects such as Inga III which could take decades to complete.



Source: <https://congoepela.resourcematters.org/en><sup>67</sup>

67 Resource Matters - Congo Epela, Overview of hydroelectric, solar and wind potential to electrify the mining sector and surrounding communities

## **Regularising and increasing transparency in the allocation of energy sites**

The allocation of energy sites remains opaque in the DRC. Partnerships between the National Electricity Society (SNEL) and certain players or the allocation of new sites in the public domain lack transparency, causing tensions, particularly in Nord-Kivu.

The ERA also reported that several mining operators have installed thermal units without authorisation. To avoid these issues, it is essential to regularise the grant procedures and make concession contracts more transparent.

One solution would be to create a digital platform, like the Mining Cadastre, to list sites that have already been awarded concessions and monitor calls for tender. At the same time, including the electricity sector in international transparency initiatives such as the Extractive Industries Transparency Initiative (EITI) would strengthen the sector's credibility and good governance.

## **Adopting innovative and decentralised public-private financial models**

The development of electrification projects is hampered by the lack of suitable financial models. Although funds for renewable energy exist in Africa, they remain under-utilised due to a lack of suitable, bankable projects.

Current initiatives, such as Power Africa, often focus on either financing or governance, seeing mining solely as an energy consumer, without taking into account the needs of local communities. Furthermore, financial backers favour either very large projects or limited micro-networks, without proposing

intermediate and scalable solutions that combine financing, governance and mixed markets (industry and households).

Local tax revenues could play a major role in financing, especially in mining areas. The 2018 revised mining code provides significant resources for provinces and decentralised territorial entities (DTEs). In addition, the 2014 law liberalised the electricity market, allowing the provinces to grant licences to private players, thereby encouraging local initiatives.

The Congolese government could therefore encourage public-private partnerships with hybrid financing at the decentralised level, combining mining revenues, provincial or local revenues<sup>68</sup> and loans from international financial institutions. Such an approach requires in-depth consideration of the organisational structure, loan repayments, tax regime and the inclusion of different types of customer, particularly households.

### **Mobilising support from international partners**

The DRC can also take advantage of the growing international interest in its mineral resources to obtain support for its electrification. In Namibia, for example, the European Investment Bank has financed renewable energy projects in exchange for long-term mining supply contracts. This "win-win" model could be adapted to the DRC.

European law on critical raw materials encourages precisely this type of partnership, promoting the creation of local value

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<sup>68</sup> Resource Matters, mapping of villages in DTEs and modelling of mini-grids with updated data for Congo Epela, publication year 2024. (Feasibility study on mapping of villages in DTEs and modelling mini-grids with updated data for Congo Epela)

and energy transition in strategic countries. Electrification should be a central pillar of this strategy.

Through initiatives such as the EU-Africa Global Gateway, the European Union could finance renewable energy projects through green bonds or co-investments, creating collaboration between the mining and energy sectors. For example, the DRC could incorporate electrification into major infrastructure projects such as the Lobito corridor, in particular by electrifying the railway to reduce its carbon footprint.

Finally, the DRC's membership of the MSP Forum provides an international platform to promote electrification as a priority in its relations with the European Union and the United States, maximising the chances of obtaining targeted financial and technical support.

## **Marketing phase: The need for specific regulations**

Today, operating licence holders are free to decide what volumes they export, to whom they sell and at what price. This regime has contributed to recent episodes of overproduction, as shown by the analysis of the cobalt sector above. The rapid increase in the power of cobalt-free LFP batteries has reduced cobalt's market share, while several Congolese operators, including CMOC, have massively increased their cobalt production. The rapid commissioning of the Kisanfu mine added 32,500 tonnes to global supply, and Tenke Fungurume stocks were sold off en masse following the resolution of a shareholder dispute, all at a time when other producers were also increasing their volumes.

This imbalance led to a collapse in prices, which reduced revenues for the State and the mining provinces. The lack of regulation incorporating local value-added criteria also means that export volumes are not geared to the country's industrial interests. As part of a renewed strategy, freedom to market should be framed by rules guaranteeing that the volumes authorised for export are, first and foremost, those that cannot be processed locally in the short term.

### **Strategic regulation supporting local processing**

In February 2025, the Authority for the Regulation and Control of Strategic Mineral Substance Markets (ARECOMS) initially decreed a total suspension of cobalt exports in order to curb overproduction and stabilise prices. The measure, although temporary, revealed the limits of an approach based solely on a ban: the continuation of mining production during the

suspension period suggested that the market would quickly become saturated once exports resumed, as happened after the ban on Tenke Fungurume in 2022-2023, leading to a sharp fall in prices.

Aware of these risks, and keen to preserve the country's reputation as an investment destination, ARECOMS lifted the suspension and introduced an export quota system in its place. This shift could mark an important turning point if it reflects the desire to make public action part of a more coherent, predictable and formative policy, in line with international best practice in the management of critical minerals.

### **The central role of regulation in a national critical minerals strategy**

Effective policy for strategic minerals cannot be limited to managing supply: it must also create favourable conditions for local value-addition and for securing supply chains.

In this respect, Article 7 bis of the Mining Code provides a solid legal basis, enabling specific rules to be established for the access, exploitation and sale of strategic substances. The quotas adopted by ARECOMS are fully in line with this approach, offering a flexible instrument that both avoids surpluses on the world market and directs production towards volumes with higher added value.

### **Quotas and local processing**

From an industrial policy perspective, the quota system could be designed to prioritise volumes offering the highest local added value, in line with the sector's objective of upgrading the value chain. As a guide:

- Volumes produced from refining, metal production or battery precursors could be given priority for export;

- Lightly processed products could be placed at the bottom of the order of priority and only exported once domestic needs have been met.

Such a system would encourage operators to invest in processing units in the DRC to secure their access to the international market. It could also enable the State to finely regulate the volumes placed on the world market, with a stabilising impact on prices. The Indonesian nickel model, based on making export authorisations conditional on industrial development, could provide useful benchmarks, subject to adaptation to the Congolese context.

### **Potential extension to other substances**

Even for minerals not classified as strategic, Article 266 of the 2018 revised Mining Code authorises the State to limit exports according to the needs of local industry by stipulating that: "the holder is authorised to export and market its production at the market price, subject to the State's right to determine the proportion of production to be exported according to the needs of local industry". A joint Mines-Industry decree would enable this provision to be activated and integrated into a broader strategy for securing industrial inputs.

### **Operational prerequisites**

The success of the scheme should be based on:

- A transparent mechanism for allocating quotas, based on objective criteria,
- Rigorous monitoring of flows to prevent fraud and circumvention, and close inter-institutional coordination (Ministries of Mines, Industry, Foreign Trade, Economy),
- The ability to amass and manage strategic stocks, in particular through state-owned shares in joint ventures, in order to optimise the sale of exportable volumes over time.

Taken together, these elements would make it possible to transform an emergency measure into a genuine lever for industrial policy, aligned with the DRC's ambitions to become a key player in the value chains of energy technologies and global transition.

## **Indonesian inspiration to achieve greater local processing**

In order to help stabilise prices and envisage other benefits for the DRC, Resource Matters has analysed the export policies adopted by Indonesia. Initially, Indonesia's main objective was to add value. As a result, it only allowed the export of products exceeding a certain mineral content level. It linked export authorisations to progress in the construction of foundries. After having added price stabilisation to its objectives, the government's main aim was to regulate production volumes. It linked export authorisations to the submission of a Work and Budget Plan (RKAB), which contains a three-year production plan to be approved by the Ministry of Energy and Mineral Resources (ESDM). This plan serves as a basis for setting production quotas and ensures alignment with national priorities.

### **Increasing control over the sale of state-owned shares to supply local industry**

One strategic lever for regaining control of the international market and boosting local added value is to give state-owned companies direct control over the sale of a share of mining output from joint ventures, in proportion to the state's stake. This mechanism, which has already been applied in some partnerships, would enable the DRC to regulate market flows, defer certain sales to limit the effects of overproduction, and above all reserve part of the volumes for the national processing industry. Gécamines paved the way by negotiating with CMOG (Tenke Fungurume) and GEC (Sicomines) for the right to market 20% and 32% of exports respectively. In January 2025, Reuters reported an agreement with Glencore to market 51,000 tonnes of copper from its 25% stake in Kamoto Copper Company (KCC). Discussions are also underway with Zijin and

Ivanhoe (20% of Kamo-Kakula) and with CMOC for Kisanfu (10% stake). If these agreements had existed in 2023-2024, the DRC would have controlled the average annual sale of 235,500 tonnes of contained copper and 13,500 tonnes of contained cobalt, which would have reduced Chinese domination and increased the country's bargaining power.

This control must go beyond price regulation: the volumes managed by the state-owned companies should give priority to supplying local foundries, refineries and battery precursor production units, guaranteeing a stable and competitive supply. At the same time, the government could re-examine certain controversial privatisations, such as Mutanda and Metalkol, in order to restore state control over strategic assets and strengthen its influence on the markets.

By combining state control of sales with a focus on local processing, the DRC could not only stabilise international prices but also anchor the industrial benefits of its resources within its territory.

## **Production of semi-finished products: Distinguishing between the mining regime and the industrial regime**

The question of local processing of semi-finished products such as cables or battery precursors falls within a different legal framework to that of mining.

The mining regime generally covers exploration, extraction and primary processing activities, often limited to concentration and primary processing. For copper, for example, the legal framework typically stops at the metal stage (99% copper concentration), in the form of cathodes or ingots. As soon as we begin manufacturing finished products, such as electrical wires or cables, we move out of the mining industry and into that of the manufacturing industry and productive investment.

This is why the most appropriate framework for encouraging local processing is not the mining regime, but investment and industrial common law. It is through this that the State can offer tax and customs incentives, facilitate access to infrastructure and energy, and protect companies that choose to set up locally.

However, the mining code can play a complementary role by incorporating local content mechanisms, for example by requiring a proportion of production to be made available on the national market, by regulating export conditions or even export quotas (see above), or by granting advantages to mining operators who participate in processing projects.

The creation of special economic zones could be an interesting tool to support this industrialisation goal. They enable infrastructure to be concentrated, provide a stable

and attractive tax regime, and encourage the creation of genuine industrial hubs where refineries, cable manufacturers and other businesses in the electrical sector coexist. That said, these zones are not essential: similar incentives can be incorporated directly into investment law without going through a particular territorial structure.

It would probably be difficult to directly require mining companies to start producing cables or precursors themselves. This is a different business, requiring specific industrial skills. A more realistic approach is to ask mining companies to produce refined copper locally, so as to guarantee the availability of a quality raw material for manufacturers. The government can then use targeted incentives to attract players specialising in cable manufacturing, or encourage partnerships and joint ventures between mining companies and manufacturers.

The State should align these two overlapping and interconnected regimes: on the one hand by ensuring that minerals remain available on the local market, and on the other by creating a favourable environment for the establishment of industrial companies. Special economic zones can be a useful but not compulsory lever, and the most promising option is to attract third-party manufacturers, potentially in partnership with the mining companies, rather than imposing on the latter an activity that does not correspond to their core business.

To achieve effective local processing, therefore, it is essential to define a strategy covering the entire value chain. This should begin with the identification of priority minerals on which the State can realistically concentrate its efforts, in order to promote the processing of these minerals and the creation of local added value.

This goes hand in hand with the degree of processing envisaged: hydroxide or cathode. Once these minerals have been identified, the government will have to step up exploration to ensure complete geological control. This presupposes the existence or development of a coherent geological policy for mining activities already underway, as well as a clear outlook for the medium and long term: financing exploration with own funds, proper management, and incorporation of the exploration results generated by private operators, etc. Control over geology would lead to a more rigorous process for granting operating licences, based in particular on objective criteria: the requirement to add value to minerals, consideration of geopolitical balance in the selection of investors/partners, uncompromising analysis of feasibility studies and their integration into the country's geological database. For optimal local exploitation and processing, clear vision and planning is needed to remove one of the major obstacles to achieving the desired result - the energy deficit.

To this end, a decentralised public-private financial model appears to be an appropriate option. It requires greater transparency in the allocation of energy sites and in the conclusion of electricity supply agreements, as well as the mobilisation of international financial partners to support electrification projects. In the marketing phase, given the volatility of the market, the determination of quotas should be geared towards local industry, while increasing control over the share of state-owned companies. Finally, a distinction needs to be made between the mining regime and the industrial regime, as the two do not have the same constraints or operating methods.

# Conclusions and Recommendations for the Government of the DRC

## I. General conclusion: The need for a holistic strategy

The DRC's fundamental ambition - to convert its exceptional geological advantage, as holder of around 80% of the world's cobalt production and as the world's second largest copper producer, into genuinely inclusive economic development - is today facing systemic failings rather than isolated obstacles. Past policies have been marked by regulatory inconsistency (repeated moratoria on the export of copper concentrates) and structural weakness (a perpetual energy deficit). These factors have led to limited value capture (mainly exports of cobalt hydroxides) and high market vulnerability (cobalt price collapse in 2024).

The source material concludes that achieving local processing requires regaining control over the entire value chain, from the granting of mining licences to the approval of exports, and approaching the national strategy as an integrated, multi-phase challenge.

## II. Priority Recommendations (Immediate and Fundamental Actions)

The DRC must immediately focus on resolving the fundamental constraints that have historically undermined all political efforts:

### 1. Eliminate the Energy Deficit (Structural priority)

#### Conclusion:

The energy deficit is the biggest structural bottleneck, preventing real industrialisation policy for almost 15 years.

#### Recommendations:

- **Strategic planning:** Urgently define a rigorous and integrated Strategic Energy Investment Plan (short, medium and long term), in partnership with the provinces and the private sector. This plan must cover all demand (industry, SMEs, households).
- **Transparency and Public Service:** Make any renovation or construction of energy infrastructure financed by mining operators subject to binding public service obligations to ensure that the electricity also benefits local communities and other industrial users in the region
- **Decentralised financing:** Adopt innovative and decentralised Public-Private Partnership (PPP) models, combining mining/provincial revenues and loans from international financial institutions, to accelerate the implementation of small and medium-sized hydroelectric and solar power plants near mining areas.

## 2. Establish Regulatory Discipline and Credibility

### Conclusion:

Political will has proved inconsistent in practice, leading to persistent legal exemptions (copper) and opaque allocation of permits (lithium), weakening the state's ability to demand processing.

### Recommendations:

- **Put an end to copper exemptions:** Rigorously and definitively apply Article 342 of the revised Mining Code to put an end to all exemptions allowing the export of concentrates, creating the conditions for 100% of copper to be processed locally into cathodes.
- **Demand Industrial Planning:** Strictly apply Article 108 bis of the Mining Code, which requires all operating licence holders to submit and comply with a Processing Plan for Extracted Minerals, a provision that nowadays seems to have "fallen into disuse".
- **Lithium and transparency:** Award lithium operating licences through competitive tenders, making local value-addition a key criterion and requiring a credible plan for processing into battery-grade lithium hydroxide or lithium carbonate.

## III. Strategic recommendations (The Holistic Value Chain)

The DRC must build a coherent industrial policy by applying specific regulatory levers at each stage of the value chain:

### 1. Upstream control (Exploration and Production phases)

- **Control Geological Data:** Strengthen the capacity of the Congo National Geological Service (SGN-C) to accrue and analyse the exploration results of private operators, in

order to better value strategic minerals in international negotiations.

- **Rigorous examination of studies:** The approval process for feasibility studies must become a central regulatory tool and must include a qualitative analysis of the degree and mechanisms of the local processing proposed. The introduction of independent juries could enhance credibility.
- **Geopolitical balance:** Implement an active licensing policy to avoid excessive dependence on a single geopolitical bloc, by requiring local processing as a mandatory criterion in the award of mining titles.

## 2. Industrial and Fiscal Policy (Midstream)

- **Review the "Strategic" Definition:** Revise Article 7 bis of the Mining Code to align the definition of "strategic" with national priorities (needs of local industry, fiscal importance) rather than with the international situation.
- **Flexible royalties:** Adopt a sliding royalty rate for strategic substances, adjusting taxation according to market fluctuations, in order to mitigate the negative effects of the fixed 10% rate and facilitate strategic classification.
- **Coordination of schemes:** Ensure coordination between the Mining Regime (which guarantees local supply of refined products) and the Industrial Regime (which offers targeted incentives, customs and tax breaks for manufacturers of semi-finished products such as cables and precursors).

## 3. Downstream control (Marketing phase)

- **Value-added quotas (Cobalt):** Reinforce cobalt marketing measures through a flexible quota system that uses value

addition as the main criterion, giving priority to the export of volumes processed into metal or precursors.

- **Reserve local production:** Activate Article 266 of the Mining Code to determine the proportion of production to be reserved for the needs of local industry, ensuring supply for the future precursor plant.
- **Control of state shares:** Extend state-owned companies' (Gécamines) control over the sale of their share of mining output from joint-ventures (e.g. 20-32% for cobalt and copper). These volumes should be used to stabilise prices and supply local processing units as a priority.
- **Finalise the SEZ:** Complete the feasibility study (updated with current cobalt prices) and establish a clear incentive framework and effective governance for the Musompo Special Economic Zone (SEZ) to attract specialist partners.



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