

Tracing Cobalt in Fragmented Supply Chains

In collaboration with  University of St. Gallen



Case Study

Date of completion
September

2022

Location
Rümlang

Switzerland

General information

Cobalt is often mined and traded together with copper (e.g.: Copperbelt in DRC).

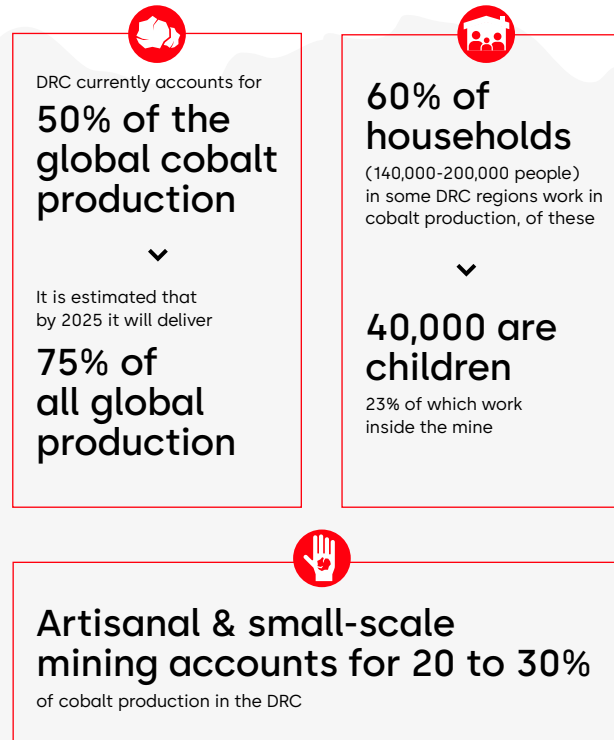
Of particular relevance with regards to the situation in the DRC – but systemic for cobalt mining as a whole – are allegations of forced labour, labour exploitation, child labour and health and safety issues (hazardous working conditions) at the sourcing stage of the supply chain, in combination with human rights violations as a result of security concerns – which often occur due to the use of public and private security forces. Child labour risks are a systemic issue in the DRC mining industry.

Cobalt Supply Chains:

The cobalt supply is currently quite fragmented from a producer perspective, with the top three players today accounting for just below 40% of global mine supply – Glencore (22%), DRC state miner Gécamines (9%) and China Molybdenum (7%). The People's Republic of China (China) holds a powerful position in the global cobalt supply chain. Among the fourteen largest cobalt miners in the DRC, eight are Chinese-owned. After the initial sourcing of cobalt, the majority of ore is refined in China. Most of the refining operations for cobalt are situated in China, accounting for 60% of the refined cobalt supply in 2018 and more than 80% of the production of cobalt chemicals in 2017.

Allegations of forced labour, labour exploitation, child labour, misuse of private security forces, and hazardous working conditions are systemic for cobalt mining as a whole, but of particular relevance in DRC.

Democratic Republic of Congo (DRC)



Cobalt is often mined and traded together with copper. The cobalt and copper supply chain can be divided into the upstream and downstream supply chains.

The upstream supply chain is presented as two distinct types of mining, namely artisanal and smallscale mining (ASM) and large-scale professional mining (LSM). ASM activities can take place in privately owned mining concessions, whether tolerated or not by the owner, as well as sometimes in residential areas. Yet, there is extensive interaction throughout the upstream supply chain between ASM and LSM, both commercially and physically.

ASM and LSM are mixed in a way that it is impossible to dissociate one from the other.

Although human rights abuses in ASM are widely known, LSM also entails risks, such as human rights violations by security personnel, which can be either private security forces or military groups. Security personnel is often used to protect the mines and there have been many allegations concerning their use of physical force against intruders.

Artisanal cobalt miners migrate from mine to mine and also work in privately-owned Large Scale Mines.

In DRC, there are formal and informal mines and they can be located in privately owned concessions and in residential areas. The reason behind the low levels of formalization in the DRC's ASM sector lies in the fact that many legal provisions have never been fully implemented and that many supply chain stakeholders are not keen to work in the formal sector for reasons such as administrative burden or taxation.

Figure 1: Upstream supply chain in detail

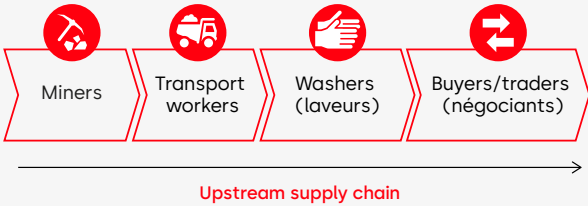
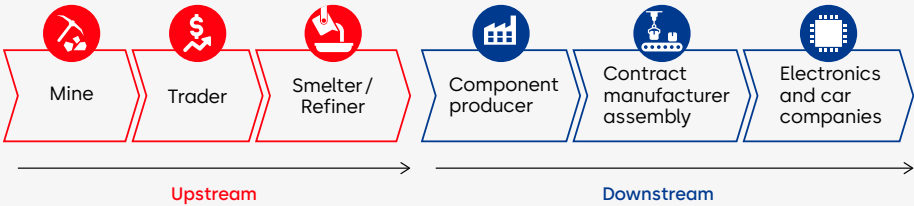


Figure 2: Flow chart of generic supply chain (AI, 2016, p.42)



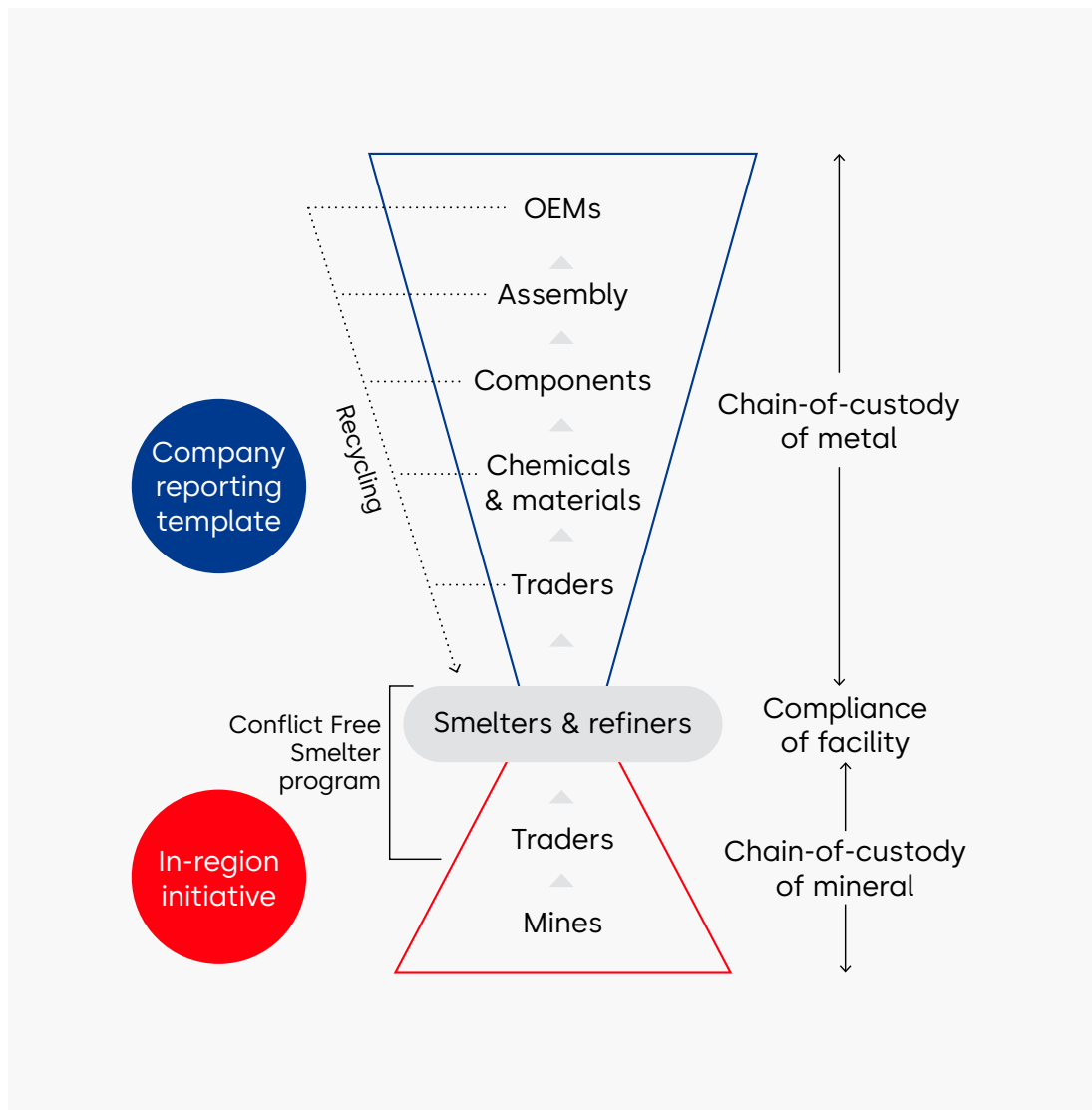


Figure 3: Supply chain of metals from mines to final OEM products (Young & Dias, 2012, pw.2)

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Challenges to traceability:

The cobalt supply chain structure is fragmented and opaque. The intersection between upstream and downstream actors inhibits the densest point in the supply chain as the middle of the hour glass structure. Furthermore, only a handful of cobalt mines in the DRC have a social certification and monitoring scheme in place.

Cobalt Traceability is currently highly complex due to the lack of transparency from the different actors and the potential mismatches between the digital data and physical material. Furthermore, cobalt is fungible and products from different sources are easily mixed during the refining process. Another challenge to traceability stems from the fact that cobalt travels from the DRC through different countries like Zambia or Tanzania before it reaches refiners in China. Once in Chinese soil, experts affirm that the Cobalt mined in the DRC enters a black box with regards to credibility and traceability.

Best practices:

Experts affirm that banning cobalt tainted by human rights abuses is not the way forward, since it would just drive the trade underground.

The raw materials having an artisanal origin are not in itself problematic, and a targeted boycott of such production by buyers would lead to increasing opacity and a deterioration of the conditions of local ASM mining.

Several multi-stakeholder initiatives and civil society organizations recommend increased engagement with artisanal miners and formalization of ASM.

The best solution is for miners and governments to "create more zones where artisanal miners can work that are of a high enough quality for them to make a decent living".

For downstream companies, experts recommend starting to work with their major suppliers, and use a trickle-down approach by requiring information from the main suppliers and their subsidiaries. Saliency risk assessments are presented as useful exercises, along with an increase in the disclosures and transparency of the company's supply chain.

For mid-tier and upstream companies, experts recommend conducting social audits - preferably with local experts - developing tailored due diligence and close collaboration with suppliers; and most importantly, increase the engagement with ASM and collaborate with authorities to create regulated, safe artisanal mining zones.

No company can create systemic change on its own. Consequently, companies sourcing cobalt from the DRC should embrace a collective responsibility for action.

Multistakeholder initiatives can be a useful partner in the journey towards a more responsible cobalt supply chain.

Organizations and institutions with useful information:

- Cobalt Institute
- European Partnership for Responsible Minerals
- Fair Cobalt Alliance
- Mining and Metals Blockchain Initiative
- Responsible Cobalt Initiative
- Responsible Minerals Initiative
- Responsible Sourcing Blockchain Network (RSBN)
- Better Mining (creates ASM mine site due diligence data)

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