Cobalt Mining in Congo: Ethical Accountability in Electronics

Introduction

Cobalt is a naturally occurring element, found in group VIII of the periodic table. It is abundant in the Earth’s core and less abundant on the surface, generally found in the form of ores. It is often mined as a by-product of nickel and copper mining. Cobalt ores are found in the Democratic Republic of the Congo, China, Zambia, Australia, Finland, Azerbaijan, and Kazakhstan, and the former four are the world’s major producers [1]. Historically, people have used cobalt for its distinctive blue tint to color items such as jewelry and pottery. In the last few decades, the use of cobalt has expanded drastically with the increase in innovation of electronics around the world. Cobalt is a major component in rechargeable batteries, with around five to ten grams of cobalt in each smartphone, one ounce in each laptop, and ten to twenty pounds in the typical electric car [2].

Since consumers of these electronics are generally unaware of the materials in the goods that they use, this paper hopes to bring to light the human rights violations prevalent in the supply chain of cobalt. The focus will be on cobalt that comes from the Democratic Republic of the Congo (hereby referred to as the DRC or Congo), which makes up more than half of the world’s supply [3], as well as other parties downstream of the supply chain such as Chinese battery manufacturers and American technology companies. The end of this paper contains recommendations for governmental and business solutions to this human rights crisis.
Overview of Cobalt Mining in Congo

The DRC’s largest source of revenue comes from its mining and minerals sector. Congo produces tin, tantalum, tungsten, gold, diamonds, copper, cobalt, and other materials. While tin, tantalum, tungsten, and gold (3TG) are mined in conflict-ridden eastern Congo, cobalt and copper are mined in the relatively peaceful south in the former province of Katanga [4].

Cobalt mining in the DRC can be split into two types, industrial and artisanal, differing in scale, regulations, and machinery usage. Industrial mining in the southern part of Congo employs the use of heavy machinery to mine copper and cobalt. Historically, these mines have been controlled by the Gecamines, a state-owned company, which became bankrupt in the 1990’s. After this, the industry was privatized, and mines are currently operated by private, often foreign, corporations. These industrial mines often disrupt and displace local communities, with little consultation [5]. The bankruptcy of Gecamines has also led to an increase in the artisanal mining of cobalt. The reality of artisanal mining is much less pretty than the name suggests. Individuals, working either by themselves or in cooperatives, mine cobalt by hand. These miners, called *creuseurs*, often work in deep tunnels and mine shafts, using only hand tools like chisels and mallets. Miners also dig for cobalt near the surface in the discarded tailings of inactive industrial mines [3]. The DRC’s 2002 Mining Code requires *creuseurs* to carry Artisanal Exploitation Cards and to only mine within authorized Artisanal Mining Zones [6]. These authorized zones are few in number, leading to a large amount of illegal mining. *Creuseurs* sell their mined cobalt to trading posts stationed around the area, usually owned by Chinese companies. Cobalt from both industrial and artisanal mining is then exported to battery manufacturing companies in China [3].
Environmental and Health Issues

Cobalt mining is dangerous for miners themselves and the communities surrounding the mines. Though Congo has areas protected from mining, the government-owned and/or government-approved nature of the mining industry has allowed for companies to set up industrial mines even in environmentally-protected areas, polluting the land and water. An example of this is the mines in the Basse Kando, a protected hunting reserve, where Chinese mining company *Minière de Kalumbwe Myunga* discharge effluent directly into the Dikanga River [4]. Water quality tests on this river shows that the water is highly mineralized and contains lead in high concentrations. Since there are no other water sources available, nearby villagers still dangerously use this water for fishing, irrigating farmland, washing, and drinking [4]. The company has taken very little responsibility for the damage it has caused on these communities.

Industrial mining and processing facilities also contribute to air pollution in nearby villages and cities. The national railway has many problems, so the mining industry almost exclusively uses trucks to transport ores, chemicals, equipment and machinery. Thousands of trucks each day pass by villages on main roads and through cities, emitting diesel fumes and dust. Dangerous minerals often fall off trucks onto the streets where children play. The facilities themselves also have furnaces that emit pollutant-filled smoke all day and night, causing respiratory problems in the population [4]. The Mining Code states that mines should be a distance of at least ninety meters from an inhabited area and at least one hundred and eighty meters from houses [6], but this regulation is rarely followed. Residents have little say in the location and proximity of these mines and major roads to their houses.
Creuseurs in artisanal mines risk their lives every day. Chronic exposure to cobalt dust often results in “Hard Metal Lung Disease,” which can be fatal. Skin contact can also lead to contact dermatitis [3]. The DRC Mining Code contains no mention of safety apparel and equipment when dealing with cobalt [6], even though the CDC advises the use of respirators and personal protective equipment [7]. In 2015, Amnesty International and Afrewatch interviewed people in five artisanal mining areas and found that the vast majority did not have any basic protective equipment, including gloves and work overalls [3].

Since artisanal mines are often illegal and hand dug, many are not constructed and managed safely. Extending up to sixty meters underground, tunnels can collapse due to small mistakes or rain water entering. There is little communication between different groups of creuseurs, so sometimes tunnels can meet, putting their structural integrities in danger [3]. Major injuries and death are common, usually caused by pit collapse, fires, and/or suffocation. In an effort to extract as much cobalt as possible in order to make a livelihood, miners sometime ignore warnings of past accidents in the same area, leading to their own demise.

Dangerous working conditions are not limited to inside the tunnels. Men, women, and children work on the surface of the mine areas sorting and washing minerals. They have to carry heavy loads, usually around fifty kilograms, for long distances to the cobalt trading posts. The work is physically demanding, and working in dirty water all day often leads to urinary tract infections. Overall, accidents, working conditions, and diseases are not reported to the Congolese government, in fear of getting in trouble for mining outside of designated artisanal mining zones [3].
Labor Issues

The cobalt mining industry in Congo is ripe with labor issues. Pay is directly tied to the amount of cobalt one can dig: able-bodied male *creuseurs* get the equivalent of $2 to $3 on a good day, many get much worse [2]. There is no insurance associated with this pay, so injuries and funeral costs are burdened among the injured and their families (relatedly there is no compensation for lost wages during recovery). Often times, employees at the trading posts and tax officials are corrupt, taking more than their fare shares of taxes and fees [3], and thus miners are left with a small percentage of what they earned.

Child labor is also incredibly prevalent in the area, due to a desperate need for money and lack of adequate education infrastructure. Children often work on the surface outside the tunnels, sorting and washing minerals. They also collect minerals from active and inactive industrial mines. In interviews with child miners, Amnesty International found that they often had to carry bags weighing twenty to forty kilograms and worked up to twelve hours a day just to earn a dollar or two. They would work in extreme weather without any protective equipment [3]. Children also often face physical abuse and financial exploitation. Security guards of industrial mines sometimes caught trespassing children and abused them. Adult artisanal miners sometimes stole children’s stashes of minerals. Children usually do not have scales to weigh their stashes, so traders would often exploit them by paying less than what the minerals are worth [3].

Considering that the DRC government has ratified all key international conventions regarding child labor [8], Congo has failed to uphold itself to the standards that it has agreed to. Mining is categorically considered one of the worst forms of child labor, and the Congolese
government is doing little to stop it [8]. Even though primary education is supposed to be free, families are still often forced to pay for teacher’s salaries and school supplies. In order to support their families in paying these fees, children would work after school and long hours on weekends in the mines [3]. According to international laws regarding child labor, education is compulsory until 15 years old and the minimum age for hazardous work is 18 (16 for normal work) [8]. This three year gap makes children 15 to 18 years old especially susceptible to child labor.

**Failure of Regulations**

In addition to inadequate child labor regulations discussed above, both the Congolese government and international laws fail to regulate the cobalt trade well. First, there is a lack of authorized areas for artisanal mining, so creuseurs risk heavy fines and personal safety to make a livelihood. Also, the DRC fails to monitor and enforce the few standards that it does set. The Ministry of Labour is responsible for this, but it has hired only twenty inspectors in the entire former province of Katanga [3]. These inspectors do not have adequate training or funding, which leads to corruption and financial exploitation of miners.

Outside of Congo, many countries have passed laws regarding use of “conflict minerals,” including the United States in 2010. However, cobalt is not considered a conflict mineral. Usually, just gold, tin, tantalum, and tungsten are on the list [2]. The southern part of Congo tends to be more peaceful than the rest of the nature, so it is often ignored in international ethics. Therefore, most international corporations are not required to track the human rights behind their cobalt usage.
Corporate Responsibility

Though cobalt is often not explicitly considered a “conflict mineral,” companies have an implicit responsibility to preserve human rights around the world. The UN Guiding Principles on Business and Human Rights (UNGPs) require companies to “do no harm,” even if they are conducting business in countries that do not protect their citizens [3]. The OECD (Organization for Economic Cooperation and Development) provides guidelines on how to achieve UNGPs, dividing companies at different stages of supply chains into “upstream” and “downstream” companies. Upstream companies (miners, traders, smelters, refiners) are expected to trace and understand the circumstances in which minerals are extracted, traded, and handled, and they should manage human rights issues in their supply chains. Downstream companies (component producers, assembly companies, electronic/car companies) are expected to trace their supply chain down to the refiner (the most downstream of upstream companies), and to inspect the human rights policies of these refineries and everything downstream [3]. They are not required to trace their supply chain back to the minerals extraction, so human rights violations can slip through the system if a company in the middle of the supply chain is hiding shady practices.

Due to both regulations and public image, technology companies have an interest in making their supply chains as clean as possible. However, it is not common knowledge that cobalt is a major component in electronics and car batteries, so public scrutiny for cobalt is less than that of other “conflict” minerals. This mindset is starting to change though. In September of 2016, the Washington Post published an investigative piece tracing cobalt from phones and laptops to artisanal mines in the Congo [2]. Though non-profits had published similar reports earlier, this was the first time a major news source discussed the issue (there was an article
from the Guardian earlier, but it was just a summary of Amnesty International’s work, rather than its own investigative piece). The Washington Post article spawned follow-up articles, increasing public awareness of the issue.

When asked about their cobalt supply chains, many companies were unaware (or feigned unawareness) of the human rights and child labor violations prevalent in Congo. Huayou Cobalt, a major player in the cobalt trade in Congo, admitted to not knowing that buying artisanal cobalt “would increase directly or indirectly child labor and human rights” risks. It has started finding out more information about their supply chain and is working with the OECD to develop more responsible guidelines. Apple, one of Huayou’s customers, plans to work with Huayou to clean up the supply chain and will treat cobalt as a conflict mineral. Most of the other companies question flat out deny the use of questionably ethical cobalt [9]. Huayou Cobalt and Apple’s responses show promise in fixing the cobalt supply chain, but there is still a long ways to go for companies to take full responsibility.

**Recommendations and Conclusion**

Human rights violations in the mining of cobalt are caused by systematic problems rooted in the DRC government, international governments, and electronics companies. The DRC government can help alleviate the issue by putting resources into the education so that children can stay in school for free, by revising mining codes to require protective equipment, and by opening more zones for legal and safe artisanal mining. The international community can officially designate cobalt as a conflict mineral, and revise supply chain management standards of downstream companies to include the mining of minerals. International companies can
internally improve their practices (and public image) by taking steps to ensure a sound supply chain.

In conclusion, cobalt mining raise heavy concerns about environmental, health, and labor rights for poor communities in Congo. These concerns should be known by consumers in the developed world, comfortably using computers, phones, and cars. Cleaning up the cobalt supply chain will take time, money, and effort, but it is definitely possible, especially with cooperation between different governments and companies.

References


