

Risk-assessment: Conflict minerals

A report on behalf of Direktoratet for forvaltning og IKT (DIFI) by
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Introduction

Swedwatch has carried out risk assessments of different product categories on behalf of Direktoratet for forvaltning og IKT (DIFI). The purpose of the risk assessments is to provide information on potential adverse impacts on labour rights and human rights in the supply chains of the selected products. The risk assessments will guide contracting authorities on the importance of social considerations in their purchasing practices and under what conditions such criteria should be applied. The risk assessments will also improve the readers' understanding of what to look for when monitoring supplier compliance.

It is important to note that the risk assessments do not aim to scrutinise or describe the supply chain of any particular brand or supplier. The purpose is to give a general understanding of the potential risks linked to the product in general.

General risks are broadly outlined in the narrative text, while risks categorised as most adverse are summarised in an introductory risk matrix. The grading at the bottom of the risk matrix indicates a combination of the *severity* and *likelihood* of the risk and aims to provide guidance on where the main risks are normally found in the supply chain. For example, for products that are assembled in both a high-risk and a low-risk context to more or less the same extent, the risk will be graded lower than if the product had been predominantly assembled in a high-risk environment. This also means that even if a number of potential severe risks are listed in the column, the risk may still be considered low if it is likely that the production mostly takes place under safe and sound processes in a low-risk environment.

The grading includes the following range:

Very low	Low	Medium-high	High	Very high
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Method and data

The data used for the risk assessments comes mainly from civil society reports, investigative articles, and academic research. As transparency and traceability is often limited, trading data has been used for the mapping of the supply chains. Therefore, the supply chain data, especially on a component and raw material level, partly presents the likelihood of a certain producing country being included in the supply chain. The supply chain data must therefore not be viewed as exact for every single product procured by Norwegian contracting authorities but should be considered a general estimate.

This report was written in April 2020.

Conflict minerals

This risk assessment focuses on the four conflict minerals: tin, tantalum, tungsten and gold. General risks concerning mining of conflict minerals, cobalt and other minerals has also been included. As the focus of this report is extraction and processing of minerals, the grading only concerns the raw material level.

It should be noted that the extraction of and trade in many other minerals are linked to armed and social conflicts around the world. The focus of this risk assessment is however limited to the minerals first referred to as conflict minerals due to the role that they have and continue to play in the armed conflict in the Democratic Republic of the Congo (DRC).

Summary of the most severe risks

Raw materials: Gold, tin, tungsten, tantalum and cobalt
Finance of armed groups engaged in conflict Illegal trade and tax evasion Child labour Forced labour Hazardous working conditions Violations of indigenous peoples' rights Discrimination against female workers Forced displacement and land grabbing Health impacts Social disturbance and conflict with local communities Environmental pollution of air, water and land Sexual harassment, abuse and violence
Very high risk

The supply chain

Gold ¹	Tin ²	Tantalum ³	Tungsten ⁴	Cobalt ⁵
China Australia Russia United States Canada Peru Indonesia Ghana South Africa and many more	China Indonesia Myanmar Peru Brazil Bolivia DRC	DRC Rwanda Brazil Nigeria China DRC Rwanda Brazil Nigeria China	China Vietnam Mongolia Russia	DRC Russia Australia Philippines Cuba Madagascar Papua New Guinea South Africa Morocco China
Smelters and refiners (selection of re-occurring countries) ⁶				
Republic of Korea China Japan Italy Germany USA Russia India Taiwan Austria Brazil Mexico Kazakhstan	Indonesia China Japan Brazil USA Bolivia Poland	China Vietnam USA Japan Germany Brazil Russia	China USA Germany Russia Vietnam Austria Philippines	China Belgium Finland

Information and communication technology (ICT) and other electronic devices and products (including vehicles, construction materials and health care technology) contain large quantities of different metals. Minerals are mined all over the world, either through large-scale mining requiring large machinery or, through often (but not always) unregulated small-scale and artisanal mining, where people extract minerals with simple tools. After extraction, minerals are processed into metal in smelters and refineries, where the raw material is blended together from different mines, not rarely located in different parts of the world.

Once the metal is processed, it is passed on to component producers before ending up in finished electronic devices. Mineral supply chains are in general long and complex, characterised by low traceability and transparency. For example, computer device producer Hewlett-Packard estimates

¹ World Gold Council, [Gold mine production](#), 2019, retrieved 2020-04-22

² US Geological Survey, [Tin 2020](#), retrieved 2020-04-22

³ US Geological Survey, [Tantalum 2020](#), retrieved 2020-04-22

⁴ US Geological Survey, [Tungsten 2020](#), retrieved 2020-04-22

⁵ US Geological Survey, [Cobalt 2020](#), retrieved 2020-04-22 Please note that cobalt is not defined as a conflict mineral.

⁶ Based on smelters and refiners lists from [Apple 2020](#); [Dell](#) 2018; [Samsung](#) (without Cobalt) 2018.

that there is between four to ten steps between the smelter, where the minerals are processed and refined, and finished product.⁷

Gold, tin, tantalum and tungsten (3TG) are defined as conflict minerals⁸ and are present in most electronic devices. Just as other minerals, 3TG minerals are extracted in a vast number of countries, of which several can be classified as high-risk contexts such as the Democratic Republic of Congo (DRC), Myanmar and the Philippines, where rule of law is weak and society is marked by insecurity, armed conflict and repression.⁹ Cobalt is also extracted in numerous places; however, the DRC produces 60 percent of all cobalt available on the global market.¹⁰

Risks

3TG minerals are defined as conflict minerals as the artisanal mining of these minerals has been known to finance the long-standing armed conflict and warfare in the eastern regions of the DRC. In lawless areas of the country, armed groups engage in violent warfare and compete for control over artisanal mines and mineral trade. Many of these groups include child soldiers. The profit from selling the minerals which eventually end up on the global market, enables continuous warfare and underpins a persistent humanitarian crisis and terror targeting the local communities, including murder, sexual violence against women and children and forced displacement.¹¹ A big portion of minerals such as gold extracted in the DRC is smuggled out of the country, making it difficult to know the exact origin of the ore.¹²

Risks associated with conflict minerals are not exclusive to the DRC. Mineral extraction in Afghanistan has also been reported to support Taliban terrorism and armed conflict.¹³ Rebel groups in both Colombia and the Central African Republic largely finance their operations through illegal mineral trade. As in the case of Myanmar, trade in these minerals can also be linked to repressive regimes.¹⁴

In recent years, governments, human rights defenders and companies have taken steps to introduce regulations and stimulate trade in more sustainably mined minerals. Following legal regulations of the Dodd-Frank Act (forcing U.S-listed companies to report on their 3TG supply chains and when sourcing from the DRC or adjoining countries, explain their human rights due diligence measures) as well as public scrutiny, global technology brands and other companies investigate and report on smelters and refiners from which they purchase 3TG minerals, and, to some extent, cobalt. Companies have to varying degree taken measures to ensure that they do not indirectly fund armed conflict through third-party audits of smelters' human rights due diligence processes. According to information from the ICT industry, work has also begun to trace three other problematic minerals: cobalt, mica and lithium.¹⁵ On January 2021 the EU conflict mineral regulation will come into force. The regulation will require that importers within the EU conduct human rights due diligence in line with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-

⁷ Hewlett Packard, [Responsible Minerals Sourcing](#), undated, retrieved 2020-04-22

⁸ The original definition is presented in the US Dodd-Frank Act, mentioning columbite-tantalite (coltan), cassiterite, gold, wolframite, or their derivatives, extracted in the DRC or in any of the nine adjoining countries. See www.sec.gov/rules/final/2012/34-67716.pdf.

⁹ OECD, [The OECD Due Diligence Guidance for Responsible Supply Chains from Conflict-Affected and High-risk Areas, Third edition](#), 2016.

¹⁰ Investing News, [Top cobalt production by country](#), 2020-02-17, retrieved 2020-04-24

¹¹ Global Witness, [Conflict Minerals in Eastern Congo](#), hämtad 2020-04-22

¹² Responsible Sourcing Network, [Mining the Disclosures 2019 An Investor Guide to Conflict Minerals and Cobalt Reporting in Year Six](#), 2019

¹³ United States Institute for Peace, [Illegal Extraction of Minerals as a Driver of Conflict in Afghanistan](#), 2017-07-24

¹⁴ Mining, ['Conflict minerals' entering tech supply chains from countries beyond Africa — report](#), 2017

¹⁵ Swedwatch, [Copper with cost – human rights and environmental risks in the mineral supply chains of ICT: A case study from Zambia](#), 2019

Affected and High-Risk Areas, and to import 3TG minerals only from responsible and “conflict-free” sources. The regulation does not focus on a particular country or region. The regulation has been criticised as it only concerns importers such as smelters and refiners and companies importing metal-stage products but will not cover downstream companies importing mineral containing products, such as ICT brands and vendors.¹⁶

The Responsible Sourcing Network annually assess corporate compliance with the Dodd-Frank Act and the level of corporate effort to prevent and mitigate the risk of indirectly financing armed conflict through sourcing of minerals. The most recent assessment shows that global technology brands are in the lead in taking action in this regard. However, across all relevant sectors, measures to prevent the financing of armed conflict are generally decreasing. In addition, the assessment points to significant limitations in current audit schemes to detect human rights violations, highlighting several reports where human rights abuse has taken place in ICT mineral supply chains, despite smelters being assessed as conformant to the legal standard.¹⁷

Mineral extraction is not only associated with fuelling armed conflict. In both large-scale extraction and in small-scale and artisanal mining, mineral extraction is highly associated with human rights risks as well as environmental degradation. Forced displacement of entire villages may occur without consultation with and compensation for local communities. Displacement often means that local communities’ livelihoods decrease or disappear altogether. Other widespread problems associated with mineral extraction are hazardous working conditions in mines, forced labour and child labour, as well as spurring of social conflict with the local population that may result in violence, abuse and sometimes murder of human rights defenders.¹⁸ The organisation Global Witness reports that 43 environmental or lands rights defenders were killed in 2018, linked to the mining and extraction industries.¹⁹ The organisation Front Line Defenders has reported that 321 human rights defenders in 27 countries were targeted and killed for their work in 2018, of which 77 percent were defending land, environmental or indigenous peoples’ rights, often linked to extractive industries. The number of reported killings in the Front Line Defenders report is the highest ever recorded.²⁰

Children are particularly vulnerable to negative impacts from mining operations. For example, displacement and in-migration of miners, pollution of the environment and the context of armed conflict may, among other things, impact children’s access to education in mining areas.²¹

There is a lack of credible statistics, but according to an estimate from a representative of the International Trade Union Confederation (ITUC), between 7,000 and 8,000 workers in the formal mining sector die due to occupational accidents annually.²² Other figures refer to beyond 15,000.²³ Working conditions in artisanal informal mining is typically considerably worse. Miners in, for example, the DRC, work under extremely hazardous conditions in artisanal cobalt mines, where workers are crowded into narrow and deep passages, with imminent risk of wall-collapse as well as

¹⁶ Swedwatch, [Copper with cost – human rights and environmental risks in the mineral supply chains of ICT: A case study from Zambia](#), 2019; European Commission, [Conflict Minerals – the regulation explained](#), updated 2017-12-13, retrieved 2020-04-30

¹⁷ Responsible Sourcing Network, [Mining the Disclosures 2019: An Investor Guide to Conflict Minerals and Cobalt Reporting in Year Six](#), 2019

¹⁸ Forum Syd, [Ta inga risker! Utbildningsmaterial om företags ansvar och utvinning av naturresurser – Sociala risker](#), retrieved 2020-04-23

¹⁹ Global Witness, [Enemies of the state? How governments and businesses silence land and environmental defenders](#), 2019-07-30

²⁰ Front Line Defenders, [Global Analysis 2018](#), published January 2019, retrieved 2020-04-29

²¹ Unicef, [Children’s rights and the mining sector - Unicef extractive pilot](#), March 2015

²² Arbetet, “A question of Life and death”, 2019-04-12

²³ The World Counts, [Health effects of mining](#), undated, retrieved 2020-04-24

flooding and lack of oxygen, coupled with low salary levels of 2-3 USD per day.²⁴ Child labour has also been reported from cobalt mines in the DRC, supplying cobalt that ends up in lithium batteries of known brands.²⁵ Child labour is also reported from underwater gold mining in the Philippines where children dive into 25-meter-deep pits to extract gold from the bottom of rivers.²⁶ Although steps have been taken to improve safety in several extractive countries, informal artisanal mining has steadily grown²⁷, with greater risks of injury and death given the often poor working environment.²⁸

Illegal mining is a common practice in many places, where miners enter large-scale open pit mines to illegally extract ore. Illegal miners have many times ended up in violent clashes with other miners, security guards or become victims of landslides and other natural hazards. For example, 43 illegal miners digging at a Glencore gold mine were killed in a landslide²⁹ in the DRC in 2019.³⁰

As with large-scale mining and processing of ores, small-scale mining often causes environmental impacts.³¹ For example, mercury is still used in the extraction of gold in the Philippines, Colombia, Peru and many other sites.³² It has been estimated that 1,200 tonnes of mercury was released into air and water due to small-scale gold mining in 2015, also constituting a severe health hazard for workers and surrounding communities.³³ Although large-scale mining is often more regulated, environmental impacts are evident in most places. For example, emissions of air pollution and wastewater from copper mines, smelters and ore piles in Zambia have affected cultivation lands and access to clean drinking water, which has implications for surrounding communities' health and livelihoods. There are similar examples from large-scale mines in Chile, Myanmar, Canada and the DRC. Acid mine drainage from waste piles is a common threat to surrounding land, water and air. There are several reports of dams bursting and releasing toxic wastewater into the surrounding areas.³⁴ In addition, mining is one of the drivers of deforestation in subtropical areas, as well as long-lasting source of pollution, constituting a threat to flora and fauna.³⁵

Smelting is also a high-risk operation. If sufficient safety measures are not in place, there is a risk that sulphuric acid and other air pollutants are released, polluting air, water and land with highly acidic elements, causing respiratory problems, heart and lung-disease and premature deaths, as well as water contamination and loss of livelihoods among the local population.³⁶ Extraction and primary processing of minerals has also been found responsible for 26 percent of the global greenhouse gas emissions.³⁷

²⁴ The Washington post, [The Cobalt Pipeline - tracing the path from deadly hand-dug mines in Congo to consumers' phones and laptops](#), 2016

²⁵ Amnesty International, [This is what we die for](#), 2016

²⁶ Human Rights Watch, ["What ... if Something Went Wrong?" Hazardous Child Labor in Small-Scale Gold Mining in the Philippines](#), 2015-09-25

²⁷ The International Institute for Sustainable Development, [Global Trends in Artisanal and Small-Scale Mining \(ASM\): A review of key numbers and issues](#), January 2018

²⁸ [International Labour Organization, Mining \(coal; other mining\) sector](#), retrieved 2020-04-24

²⁹ Front Line Defenders, [Global Analysis 2018](#), published January 2019, retrieved 2020-04-30

³⁰ Bloomberg, [Death Toll at Glencore's Mine Puts Spotlight on Illegal Mining](#), 2019-06-29

³¹ The World Bank, [Communities, Artisanal and Small-Scale Mining](#) 2008

³² Human Rights Watch, ["What... if something went wrong?" - Hazardous Child Labor in Small-Scale Gold Mining in the Philippines](#), 2015

³³ UN Environment, [Global Mercury Assessment 2018, Key Findings](#), 2018

³⁴ Swedwatch, [Copper with cost – human rights and environmental risks in the mineral supply chains of ICT: A case study from Zambia](#), 2019

³⁵ Yale School of Forestry & Environmental Studies: Global Forest Atlas, [Mining & Extraction](#), undated, retrieved 2020-04-29

³⁶ Pure Earth, Worst Pollutants, [Top 10 worst pollutants, 2008](#) and Swedwatch, [Copper with cost – human rights and environmental risks in the mineral supply chains of ICT: A case study from Zambia](#), 2019

³⁷ The Guardian, [Resource extraction responsible for half world's carbon emissions](#), 2019-03-12

The rights of indigenous peoples are also adversely affected by mining, when large tracts of land that have traditionally belonged to indigenous communities are exploited by mining projects, which may affect local access to natural resources, livelihoods and possibilities to enjoy cultural rights. It is also common that indigenous peoples are not consulted nor compensated in accordance with international guidelines concerning the provision of mining concessions.³⁸

Sexual violence and exploitation of foremost women and girls are also closely related to extractive operations. Sexual commercial exploitation of women and girls is in some areas highly linked to extractive operations as well as increases in the rate of HIV/AIDS among local communities near to mining sites. There are reports of security personnel committing brutal sexual assaults and rape of local women and children in numerous countries. Barrick Gold Corporation's Porgera gold mine in Papua New Guinea is an infamous example where security guards gang raped hundreds of women over several years.³⁹ Rape is also used as a weapon of war in areas where warfare is financed by mineral trade in countries such as the DRC and Colombia.⁴⁰

³⁸ Vittor, L., Indigenous People and Resistance to Mining Projects, Harvard review of Latin America, 2014

³⁹ Forum Syd, [Ta inga risker! Utbildningsmaterial om företags ansvar och utvinning av naturresurser – Sociala risker](#), retrieved 2020-04-23

⁴⁰ BBC News, [Raped for speaking out against rape](#), 2016-08-16; Brown, C.. Rape as a weapon of war in the Democratic Republic of the Congo in TORTURE Volume 22, Number 1, 2012