

CA' FOSCARI UNIVERSITY

European Master's Programme in Human Rights and Democratisation

A.Y. 2020/2021

The responsibility of different actors and of Europe on the violations of the right to health of cobalt miners in Katanga

Author: de Hemptinne Priscilla

Supervisor: De Vido Sara

Abstract

Cobalt is considered as a critical raw-material and is a key component of rechargeable batteries. The rising demands for those batteries and for cobalt is arising from the energetic transition and is fostered by policies like the European Union's new instrument calling for a zero-emission mobility, the European green Deal. Katanga is the world's largest cobalt producer, but the work- and living conditions of the miners and of the Katangese population in general are worrying and subject to a lot of human rights violations. The huge pollution of water, soil and air in the region, the working conditions and the excessive exposure to cobalt induce various adverse health effects. Those health issues amount to structural violations of the right to health of the miners and the local populations. The responsibility for those violations needs to be investigated amongst the different actors. Those are, the mining companies, the transnational companies of the cobalt supply chain, the government of the Democratic Republic of Congo, the foreign government holding extraterritorial responsibility and the European Union encouraging the rising demand in cobalt.

Acknowledgments

My experience as a EMA student at the Global Campus of Human rights has definitely been a turning point in my life. This intense year spent in Venice has allowed me to learn a lot, both academically and on a human level. As I conclude this chapter of my life as well as my thesis, I would like to say a few words of thanks:

First of all, thank you to my supervisor Professor Sara De Vido and to Valentina Cagnin for their patience and their precious help to achieve this thesis.

Then, I would like to address a warm thank you to the EMA staff that has done an incredible work throughout the year, making it possible to have such a qualitative master program despite the circumstances and being always available and helpful for the students.

A Marco Caputo thanks to my Vaffa people without who the whole EMA experience would not have been the same. Thank you to Mona, Julie and Stella, my Veneto family and to Petya and Naomi on whom I could always count.

Another special thanks to my Kems people for their friendship and support throughout this second semester in La Serinissima. For the intense writing sessions in San Servolo, thank you Nick and Chloé. For all the technical tips and for the time dedicated in helping me, thank you Vincent.

Grazie a miei cari Santa Foschini, Raffa, Carlitto, Cirese, Nicky, Giulio, Lara che hanno trascorso del tempo nella sala studio con me, mi hanno incoraggiato e sostenuto durante le giornate di scrittura e mi hanno fatto ridere nei momenti di relax.

Merci de d'avoir répondu à mes appels, Mathilde Fabri, pour ton aide providentielle et Colette Braeckman, experte dans le sujet.

Ultimately, I want to deeply thank my parents and my family, for their unconditional love and support, their listening ear and their ability to make me smile during the harder moments. Special thanks to my Dad for all the supportive messages with new ideas and to my lovely nieces whose smiles and words in photos and videos have brought me joy and courage.

Table of Content

Abstract.....	2
Acknowledgments	3
Table of Content.....	4
Introduction.....	6
Chapter 1: Introducing the context of cobalt mining in Democratic Republic of Congo (DRC)...	11
1. Mining in the Democratic Republic of Congo: an historical and geographical overview	11
1.1. The Conflicts in relation with mining in the DRC	12
2. The Legal Context: The Mining Code and the Mining Reglementation	14
3. The Main Actors of the mining sector	16
3.1. The Ministry of Mines	16
3.2. Artisanal and Industrial mining.....	18
3.3. Gécamines, the State-owned mining enterprise	20
4. Mining in the Katanga region: The Copper-Cobalt sector.....	22
4.1. The Copperbelt and the general context in the Katanga region	22
4.2. The use of Cobalt	23
4.3. The Cobalt supply chain: its track in the DRC	25
5. Issues linked to the Cobalt sector in Katanga	26
5.1. The working conditions in the Katangese mines	26
5.2. Child labour.....	29
5.3. The environmental impact of Cobalt mining	30
5.4. The social impacts of Cobalt mining	32
5.5. The adverse effects of Cobalt mining on human health.....	33
6. Claims made by the Civil Society	37
Chapter 2: Analysing the Right to Health in the context of Katanga.....	39
1. The recognition of the human right to health	39
1.1. Recognition at the international level	39
1.2. Recognition at the regional level: The African Human Rights System	43
1.3. National level: DRC Constitution	45
Chapter 3: Who has a responsibility in the violations of Human Rights in the context of cobalt mining?	47

1. Mining companies and transnational enterprises: the responsibility to respect the human right to health	47
1.1. Obligations of companies under national law	48
Human rights due diligence: an overview from the UN Guiding Principles perspective	49
Additional measures that mining companies should take to respect the human right to health.....	53
1.2. Obligations of companies under international law.....	54
1.3. Other initiatives.....	59
2. The responsibility of the DRC State: health impacts and governance	60
2.1. National legislation and governance in the health and mining sectors	60
The health sector.....	60
The mining sector.....	61
2.2. Institutional framework.....	62
2.3. Judicial framework.....	63
2.4. International obligation	63
2.5. The State as an economic actor.....	65
The State’s responsibilities and Gécamines	65
The State as a shareholder in mining companies.....	66
3. The role of foreign states: extraterritorial human rights obligations	66
4. What about Europe’s responsibility?	68
5. To what extent are companies and governments responsible for the human rights violations occurring in the artisanal mining sector?	70
Conclusion	72

Introduction

Ensuring a green and clean future is fundamental to cope with the climate change we are witnessing. The European Commission adopted in 2019 its European Green Deal with the ambition to make Europe carbon neutral by 2050. In that document, the electric vehicles are presented as a priority in the mobility strategy and a key instrument for reducing greenhouse gas emissions.

The electric vehicle market in general, fostered by that kind of policy and by many European government subsidizing electrical vehicle purchases, is expected to increase exponentially over the next years. The European Commission wants to implement at least 30 million zero-emission cars by 2030.¹

The massive expansion of the electric vehicle market goes hand in hand with another rising demand, namely the exponential demand in cobalt. The trend is likely to accelerate and the demand is foreseen to increase fourfold before 2030.²

Cobalt is a key mineral for rechargeable lithium-ion batteries. Those cobalt rich batteries are lighter and have a better energy storage than previous technologies and are therefore seen as “greener”. Cobalt is thus mostly contained in smartphones, laptops and other electric devices and in electric vehicles, where a battery can amount up to 15 kilograms of refined cobalt.

The Democratic Republic of Congo (DRC), one of the poorest country on Earth, produces more than half of the world’s cobalt supply. The Southern part of DRC, the region of Katanga, is located on what is called the Copperbelt, a copper and cobalt rich region sitting on the border between Zambia and the DRC. The local population of Katanga barely benefits from the natural wealth of its underground. Instead, they have to suffer the negative consequences of the mining sector. The mining activity of the region exposes the local communities to toxic metals that threat their health and the environment. Effects on the environment result in unsafe drinkable water, contaminated soil, toxic dust, and an overall polluted region.

Concerning the impacts on human health, Professor Banza of the university of Lubumbashi, in collaboration with Professor Benoit Nemery from the University of Leuven (KULeuven, Belgium) and the university of Ghent (Belgium) have carried out extensive research about the various impairments

¹ Elena Nicolás, 'EU Commission Wants 30 Million Electric Cars By 2030' (*EUobserver*, 2021) <<https://euobserver.com/green-deal/150335>> accessed 14 July 2021.

² Dorothee Baumann-Pauly, 'Making Mining Safe And Fair: Artisanal Cobalt Extraction In The Democratic Republic Of The Congo' (World Economic Forum 2020) 5

occurring in the region. Breathing problems, birth defects, DNA damage in newborn, high cobalt concentration in urine, erectile dysfunction are some of the recurrent diseases present in the region that they have analysed.

The mining working conditions also are harsh, especially in small-scale artisanal mines. The diggers or “creuseurs” do not have any security equipment nor adequate material, digging by hand and risking their lives every moment in unsafe tunnels. Child labour and lethal accidents are recurrent, all of this as well making the cobalt mines the scene of human rights violations. Yet, artisanal mining constitutes a major source of livelihood as there are no other source of income in the region.

Around a fifth of the cobalt mined in the DRC comes from small-scale artisanal mines. This represent more cobalt than the amount produced by any other country exporting cobalt, besides the DRC. The small-scale Congolese miners sell their products to Chinese buyers or “comptoirs” that weighs their harvest with the so-called Metorex device, which determines the content of the ores. They then take care of or sell it for the refining. Refined cobalt is much more worth, but the Congolese enterprises do not take advantage of that. In that process, the ores of artisanal and industrial production are processed together. The “comptoirs” are under Chinese monopoly even if officially, it is illegal for foreigners to own one. An example is the Chinese company Congo DongFang International Mining, subsidiary of one of the largest cobalt producers Zhejiang Huayou Cobalt. The material is sent off to China where the cobalt is processed. They supply then the largest battery makers and therefore, cobalt tainted by human rights violations ends up in our popular consumer products.³

Few if any companies can trace their entire production chain and claim to have no artisanal cobalt in their products. Artisanal mining is underwoven with industrial mining in DRC. Cobalt from industrial and artisanal origins gets mixed up in the supply chain, as explained above. The DRC government recognizes few formal artisanal mining sites. This pushes artisanal miners to dig everywhere they can, may it be by illegally sneaking in industrial concessions, or under their own houses as it was discovered in Kasulo, a neighborhood located on a major cobalt deposit. Moreover, some industrial mining companies choose to use artisanal miners because the labour costs are lower.

³ Todd C. Frankel, 'The Cobalt Pipeline' (*The Washington Post*, 2016) <<https://www.washingtonpost.com/graphics/business/batteries/congo-cobalt-mining-for-lithium-ion-battery/?noredirect=on>> accessed 1 July 2021.

Artisanal cobalt is usually cheaper than the one of industrial mines because it requires less expenditure. As the demand in cobalt is on the rise, the artisanal cobalt's importance in global markets is as well. That cheap cobalt brings some international traders to opt preferentially for artisanal cobalt. And this is proven by the fact that even if demand rises exponentially, the price of cobalt does not rise as much.

Some companies claim not to use it or want to boycott cobalt originating from DRC. The fact is that this is currently almost impossible as there is no viable alternative and there are not enough large reserves elsewhere that can meet the global demand. Tesla for instance concluded last year a long-term contract for cobalt supply with Glencore, the largest supplier of cobalt in the world, that is operating a mine in Katanga.⁴ Apple and Google affirm being committed to the responsible sourcing of cobalt. However, their products containing cobalt still originate from the same Chinese battery manufacturers who themselves buy it in the DRC.

Nevertheless, due diligence practices are increasingly being implemented in businesses and companies such as Apple start to map their whole supply chain to the mine level.

Most enterprises affirm being committed to source cobalt ethically and eliminating child labour. However, little is said or done concerning the impacts of mining and its resulting pollution on the local population, especially on their health.

On the side of the government, even though a serious legal framework exists and is subject to international obligations, it fails to ensure the respect of the laws and to control mining activities as well as to provide protection for the human right to health of its citizens.

Instruments like the due diligence framework of the Organisation for Economic Co-operation and Development (OECD) or the United Nations Guiding Principles on Business and Human Rights provide prospect for the future, but their non-legally binding nature undermines all too often their effectiveness.

⁴ Sam Shead, 'Tesla Secures Cobalt Sourcing Deal With Glencore, Despite Human Rights Concerns Linked To Cobalt Mining - Business & Human Rights Resource Centre' (*Business & Human Rights Resource Centre*, 2020) <<https://www.business-humanrights.org/en/latest-news/tesla-secures-cobalt-sourcing-deal-with-glencore-despite-human-rights-concerns-linked-to-cobalt-mining/>> accessed 15 March 2021.

Therefore, there is an urgent need to create solutions, to formalise artisanal mining and to avoid contributing, causing or being directly linked with what amounts to structural abuses to the human right to health and to a healthy environment in the region of Katanga.

The aim of this research is to investigate the violations of the right to health of the cobalt miners and the overall population in Katanga and the question of the responsibility or the shared-responsibility for these violations. We want to examine whether mining enterprises and transnational companies can be held accountable for not investigating and addressing human rights violations in their operations and in their cobalt supply chain respectively. Moreover, concerning the DRC government and the foreign host states of transnational enterprises, how serious their non-compliance is in relation to their national and international obligations. Finally, the question has to be raised whether the new European ambitions stated in the European Green Deal with regards, in particular, to the zero- emission mobility and thus the use of rechargeable batteries and the rise of cobalt demand, could encourage serious human rights violations in Katanga and particularly the right to health of the cobalt miners and the overall population in that region.

Its innovative character comes from the fact that most studies made until now focus on the direct violations of human rights of the mining companies on the working conditions for instance. The indirect consequences and the impact on the health of the population has been studied with a medical perspective but not with the question of the responsibility of international actors such as the transnational enterprises or Europe.

In order to do conduct our research, we have analysed different type of materiel and done a review of the literature. The provided information is based on bibliographic resources from universities, international organisations, research centers, NGO publications, legal texts, press articles, etc. Concerning the investigation of the health issues present in Katanga, scientific papers have been analysed, both from the collaboration between Professor Banza and Professor Nemery as from other universities or research centers. In the second and third part, several legal documents have been analysed, national and international legislation, United Nations documents and other international or regional organization's declarations or treaties.

The first part of this research sets out the general context in DRC and the importance of the mining sector is that country. The situation in Katanga and the functioning of the cobalt mining sector will be

extensively outlined as well as its impact on the population. Then we will focus in depth on the adverse health effects present in the region as consequence of the mining environment.

The second chapter will discuss the right to health in the context of Katanga. The obligations this right raises at national, regional and international level will be clarified, especially in the scope of safety and health in mines and the right to a healthy environment for the population.

In the last chapter, we will discuss to what extent the mining enterprises and the transnational enterprises can be found accountable for ignoring or not addressing the problems present in their operations and in their supply chain respectively. The role of the DRC government, of the governments where transnational corporations are domiciled and finally of Europe that is putting in place zero-emission mobility policies will be examined.

Chapter 1: Introducing the context of cobalt mining in Democratic Republic of Congo (DRC)

1. Mining in the Democratic Republic of Congo : an historical and geographical overview

The Democratic Republic of Congo (DRC) is the second biggest country of Africa and one of the richest countries in terms of quantity and diversity of mineral resources in its soil.⁵ Article 58 of the Constitution of 18 February 2006 states: “*All the Congolese have the right to enjoy national wealth. The State has the duty to redistribute the wealth equitably and to safeguard the right to development.*”⁶ However, the country is also one of the poorest in the world (176th out of 189 in 2018)⁷. That paradox is often referred to as “the geological scandal”.⁸ It has given the Congolese the feeling they are naturally rich but that their wealth is robbed away from them by the world system.⁹

The exploitation of resources in the Democratic Republic of Congo is one of the most important parts of its economy. However, it raises a lot of challenges and is a complex combination of potentialities and problems.

The biggest part of the resources in DRC are located in the East of the country, with three main sectors: the tin/gold sector (cassiterite, coltan, wolframite and gold), the diamond sector. and the copper sector (copper, cobalt and zinc).¹⁰

One of the main challenges of the mining system in Congo is that the resources are located far away from the capital, Kinshasa. The federal model on which DRC is based implies that the power is decentralized, with a lot of autonomy to the provinces and the local governors. Therefore, it does not facilitate the flow of information to the central government. Each region in the East has its own mining

⁵ Aurélie Cotton and others, 'Stratégies d'influences autour des ressources minières -Cuivre, Cobalt, Coltan- dans l'Est de la République Démocratique du Congo' (2014)

⁶ Constitution de la république Démocratique du Congo 2006, art. 58

⁷ UNDP, '2018 Statistical Update: Human Development Indices and Indicators.' (New York, 2018) <http://hdr.undp.org/en/content/human-development-indices-indicators-2018...>

⁸ Dominic Johnson and Aloys Tegera, *Digging deeper: how the DR Congo's mining policy is failing the country* (Pole Institute 2005), 15.

⁹ *ibid.* 16

¹⁰ Cotton and others, 'Stratégies d'influences autour des ressources minières -Cuivre, Cobalt, Coltan- dans l'Est de la République Démocratique du Congo', 18.

specificity. While coltan is to be found mainly in Kivu, diamonds in Eastern Kasai, the exploitation of copper and cobalt occurs mainly in Katanga that is located in the Copper Belt.¹¹

The Copper Belt is the name given to the area of Central Africa that goes from North Zambia to the South of DRC, in Katanga. It is estimated to contain ten percent of the world's copper reserves. Cobalt is associated with the exploitation of copper and is therefore abundant in that region.

The different mining regions, although partly managed by the same central administration show huge disparities amongst them and face different problems regarding the impact of mining on their population mainly because of four factors: the nature of the production, with different main resources in the different regions, uncontrolled violence in some regions, an uneven economic development amongst the different regions and a lack of effective control from the central authorities.¹²

1.1.The Conflicts in relation with mining in the DRC

The mining context in Congo is historically full of human exploitation, armed conflict, abuses and mismanagement.¹³ Since the independence of the Democratic Republic of Congo in 1960, there have been conflicts succeeding each other for the control of strategic mineral resources and their supply chains (Katangese conflict 1978, Conflicts between 1996 and 2002).¹⁴ The natural resources of DRC are both a motivation and a source of financing for conflict.¹⁵ Mostly in the East part of Congo, the minerals are referred to as 'conflict minerals' because of the armed groups that use them to finance their rebellion.

In 1996, a rebellion rose in Kivu, led by Laurent Désiré Kabila where the "Alliance des Forces Démocratiques pour la Libération du Congo-Zaïre" (AFDL) was created. In 1977 those troops conquered the whole territory that was then called Zaïre and Kabila took the power. In 1998 the first African continental war started opposing the RDC and its neighboring countries for mining resource-related reasons. On 17 December 2001, a peace agreement was signed in Pretoria with the help of the

¹¹ Bonnie Campbell, editor, *Mining in Africa: Regulation and Development* (Pluto Press edn, 2009) 208

¹² *Ibid.*, 207

¹³ Rachel Perks, 'How can public-private partnerships contribute to security and human rights policy and practice in the extractive industries? A case study of The Democratic Republic of Congo (DRC)' (2012) 37 *Resources Policy* 251

¹⁴ *ibid.*, 255

¹⁵ Cotton and others, 'Stratégies d'influences autour des ressources minières -Cuivre, Cobalt, Coltan- dans l'Est de la République Démocratique du Congo' (2014) 10

United Nations (UN). Joseph Kabila became president of the transitional government.¹⁶ The ‘Mission de l’organisation des Nations Unies pour la stabilisation en République Démocratique du Congo’ (MONUSCO) mission and Kabila agreed to work at the securitisation of East Congo and to disarm the milices. Nevertheless, conflicts started again in East Congo and mostly in the form of violence against civilians.

Worldwide, some legislation is being adopted in order to stop financing those conflicts. For instance, the United States of America adopted in 2010 the Dodd-Act¹⁷ to stop financing violence through mineral trade. This legislation requires the companies to ensure that they do not contribute to the conflicts in East-Congo by disclosing their use and purchase of tin, tantalum, tungsten and gold. Cobalt and copper are not considered ‘conflict minerals’ because of the relative level of peace in Katanga.¹⁸

The Group of Experts of the Democratic Republic of Congo of the UN Security Council stated in its report of June 2019 that “armed groups continue to finance their activities through illegal mining.”¹⁹ They also investigated some other acts that constitute violations of the due diligence guidelines “for the responsible supply chain of minerals from red flag locations to mitigate the risk of providing direct or indirect support for conflict in the eastern part of the Democratic Republic of the Congo” developed by the group.²⁰

Those legislation and perspectives that contribute to reduce the violence in DRC through financial boycott are going to be further analysed in another chapter.

¹⁶ Johnson and Tegera, *Digging deeper: how the DR Congo's mining policy is failing the country* (2005) 88

¹⁷ Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Section 1502

¹⁸ Fleur Scheele, Esther De Haan and Vincent Kiezebrink, 'Cobalt blues: Environmental Pollution and Human Rights Violations in Katanga's Copper and Cobalt Mines' (2016) SOMO 576

¹⁹ United Nations Security Council, 'Final Report of The Group of Experts on The Democratic Republic of The Congo (S/2019/469)' (2019) 30

²⁰ Ibid. 31

2. The Domestic Legal Context: The Mining Code and the Mining Reglementation

Legally, mining and exploitation of the underground is regulated by the Mining Code of the Democratic Republic of Congo.²¹ The law was elaborated by experts of the World Bank and adopted in 2002, in the same period that Joseph Kabila came to power.²² It regulates artisanal and industrial mining (prospecting, research, exploitation, processing, transport, and marketing) until the commercialisation of the resources.²³ It recognises the ownership of the State on its soil as well as the holders of mining rights.²⁴

That Code defines the numerous eligibility conditions and obligations that the private actors have to respect for industrial mining, small scale mining and artisanal mining. Industrial mining is for five years of research period and 30 years of land use, small scale mining for a period shorter than ten years and for artisanal mining Congolese individuals need an official mining card for being digger or trader, and trading houses that have to be domiciled in the country.²⁵

The objective of the Mining Code was to create economic growth to lower poverty and to be very attractive to foreign enterprises in order to attract investment by for example lowering taxes. It succeeded in doing so: from 35 mining enterprises in 2002, it grew until 482 companies holding mining and quarrying rights in 2016.²⁶ However, it has not benefited the local population who has gained very little from the profits of mining.²⁷ Between 2002 and 2017, the partners of Gécamines (the State-owned mining company, see *infra*) would have exported for more than 48 billion US dollars while the DRC

²¹ Cotton and others, 'Stratégies d'influences autour des ressources minières -Cuivre, Cobalt, Coltan- dans l'Est de la République Démocratique du Congo' (2014) 25

²² Agathe Smyth, 'Code Minier En RD Congo : Les Enjeux De La Réforme - Commission Justice & Paix - Belgique Francophone' (*Commission Justice & Paix - Belgique francophone*, 2019) <<https://www.justicepaix.be/Code-minier-en-RD-Congo-les-enjeux-de-la-reforme/>> accessed 1 June 2021.

²³ Cotton and others, 'Stratégies d'influences autour des ressources minières -Cuivre, Cobalt, Coltan- dans l'Est de la République Démocratique du Congo' *étude minier* page 25

²⁴ *ibid.*, 25

²⁵ *ibid.*, 26

²⁶ Raf Custers, 'Congo : Les Multinationales Inlassablement En Opposition - Gresea' (*Gresea.be*, 2019) <<https://gresea.be/Congo-les-multinationales-inlassablement-en-opposition-1879-1879-1879-1879>> accessed 7 April 2021.

²⁷ Agathe Smyth, 'Code Minier En RD Congo : Les Enjeux De La Réforme - Commission Justice & Paix - Belgique Francophone' (*Commission Justice & Paix - Belgique francophone*, 2019) <<https://www.justicepaix.be/Code-minier-en-RD-Congo-les-enjeux-de-la-reforme/>> accessed 1 June 2021.

State perceived 3 billion dollars of mining revenues. Moreover, the Congolese State received big amounts of money from private enterprises but only a very little part went into the State budget.²⁸

The “Règlement Minier”, was published a year after the Mining Code, in 2003. In that document, the operational rules for the application of the Code are detailed.²⁹

The Mining Code could not be modified for ten years (2002-2012). At its deadline, in 2012, the government launched a review process in order to review the code, facing opposition from the mining enterprises that were fearing for their economic interests.³⁰ This resulted in the revised and annotated DRC mining code, published in March 2018. The new code had 32 innovations, stated in the preamble of the new Mining Code.³¹ Overall, the State gained a greater control of the sector with the hope that the income will more benefit the population.

Concerning taxes, the mining royalties increased from two percent to 3,5 percent of gross commercial value for base metals, and from 2 percent to 10 percent for strategic materials (defined as all mineral substances that present a particular interest in the geostrategic context), including cobalt.³²

A special tax of 50 percent on excess profits was introduced, which comes into effect when material or commodity prices increase exceptionally by more than 25 percent compared to those in the bankable feasibility study of the project.

However, it is difficult to have an effective control and collection of those taxes. Companies are resorting to tax schemes and lobbying to get preferential treatment and the article 220 of the Mining Code grants the Prime Minister the right to give incentives to protect certain projects, which increases risks of corruption.

Moreover, a new repartition of those mining royalties was decided: 50 percent goes to the provincial administration, 25 percent to the local governor, 15 percent to the “decentralized territorial entity”

²⁸ Ibid.

²⁹ Johnson and Tegera, *Digging deeper: how the DR Congo's mining policy is failing the country* (2005) 91

³⁰ Agathe Smyth, 'Code Minier En RD Congo : Les Enjeux De La Réforme - Commission Justice & Paix - Belgique Francophone' (*Commission Justice & Paix - Belgique francophone*, 2019) <<https://www.justicepaix.be/Code-minier-en-RD-Congo-les-enjeux-de-la-reforme/>> accessed 1 June 2021

³¹ Code Minier de la République Démocratique du Congo 2018, Preamble

³² République Démocratique du Congo, 'Décret N° 18/042 Du 24 Novembre 2018 Portant Déclaration Du Cobalt, Du Germanium Et De La Colombo-Tantalite « Coltan » Comme Substances Minérales Stratégiques' (2018)

(Entités Territoriales Décentralisées, ETD) in which the mining takes place and 10 percent to the “mining fund for future generations”. While before, everything was paid to the central government that then had to redistribute the money.

The obligation to have an environmental certification delivered by the Congolese Environment Agency (Agence Congolaise de l’Environnement) in order to get a mining permit came into force.

It was introduced that 0,3 percent of the turnover of holders of mining rights has to go to a local community development project. In addition, there is a new specification that defines the socio-environmental obligations of mining operators towards local communities affected by mining activities.

The revised Mining Code stresses an enhanced industrial accountability: any holder of a mining and/or quarrying right will automatically be considered responsible for damage caused to people, to property and to the environment, even in the absence of any fault or negligence and will be obliged to remedy it. This has the potential to significantly improve access to justice by communities suffering environmental damage. And furthermore, in case of population displacement, the mining operator is obliged to compensate, indemnify and resettle the populations concerned prior to such displacement.

Overall, the new Mining Code contains improvements and new dispositions in line with the recommendations of the civil society. However, there is still a need to implement those new dispositions and to design competent organisms to control their respect and effective implementation as well as to sanction in case of non-compliance. The government must ensure that the legal changes are also implemented through administrative reform. The local communities need to be informed about their rights and given the tools to claim them. This can happen thanks to outreach work as for example the translation of the new Mining Code into the four national languages.

3. The Main Actors of the mining sector

3.1. The Ministry of Mines

The whole mining sector is under administrative authority of the Minister of Mines. The actual Minister of Mines, Antoinette Nsamba Kalanday has been in function since April 2021 following Willy Kitobo Sansoni, her predecessor since 2019. The latter had launched since that year an extensive outreach campaign of the new Mining Code of 2018. He also implemented that Mining Fund for Future

Generations (FOMIN) described in the revised Mining Code, and made effective the obligation for miners to pay this 10 percent of the mining royalty at the same time as the other parts paid to the Public Treasury, the Provinces and the Decentralised Territorial Entities.³³

The different tasks of the Ministry of Mines are the following: it decides the government's politics for the mining sector, it grants mining rights and titles, it defines the ZEA areas and is controlling the prospection, research and exploitation of the resources.³⁴

The mining administration is composed of the central services, the specialised service and the 11 provincial divisions. The central services are composed by the General Secretariat, the Directorate of Geology, the Directorate of Mines, the Directorate of the Protection of the Mining Environment (DPEM), the Directorate of Studies and Planning, the Directorate of Investigations and the Directorate of General and Personnel Services.³⁵

The specialised services are divided between technical and special services. The technical service is divided between the Cellule Technique de Coordination et de Planification minière (CTCPM) that coordinates the relations between different actors of the sector and the Service d'Assistance et d'Encadrement de Small-Scale Mining (SAESSCAM recently renamed SAEMAPE) that is supervising the artisanal and small scale mining sector.

As for the special service, it includes the mining cadastre (CAMI) responsible for the mining contracts and the centre for evaluation and certification of mineral and semi-precious substances (CEEC) that works against fraud by certifying and taxing the export of resources.³⁶

At the provincial level, the sector is administered by the personnel of the Provincial Division that work in close relations with the Provincial Governor and the local Minister of Mines.³⁷

³³Patrice Bomboka, 'RDC: Les 9 Actions Phares De Willy Kitobo Samsoni À La Tête Du Ministère Des Mines' (*Zoom Eco*, 2021) <<https://zoom-eco.net/developpement/rdc-les-9-actions-phares-de-willy-kitobo-samsoni-a-la-tete-du-ministere-des-mines/>> accessed 2 June 2021

³⁴ Cotton and others (2015) 21

³⁵ Cotton and others, 'Stratégies d'influences autour des ressources minières -Cuivre, Cobalt, Coltan- dans l'Est de la République Démocratique du Congo', 21

³⁶ *ibid.*, 22

³⁷ *ibid.*, 22

The Mining Code allows the State to intervene in the mining sector as a private actor. As such, the company Gécamines (see *infra*) has as sole shareholder the state and is thus a state-owned enterprise, while Sodimico is owned at 80 percent by the State and 20 percent by the group Forrest.³⁸ All other industrial mining companies also have the Congolese State as a minor shareholder. Indeed, article 71 of the Mining Code states that every company applying for a permit to carry out mining exploitation has to transfer five percent of its capital to the State in the form of shares.³⁹ The revised Mining Code of 2018 increased that part of participation to 10 percent.⁴⁰

3.2. Artisanal and Industrial mining

The mining sector in DRC is divided between two types of stakeholders: international or regional industrial companies holding mining titles and artisanal and small-scale mining (ASM).⁴¹

Industrial mining is present in the three main mining sectors of DRC cited hereinabove (coltan, diamonds, copper). Even if the whole mining sector in Congo is mainly driven by artisanal mining, it also consists of large-scale mining projects, especially in the former province of Katanga, in the Copper-Cobalt sector.⁴² With the 2002 Peace Agreement in DRC, large-scale mining projects have reappeared as a result of foreign investments, in that fragile post-conflict context with a population that had very high needs.⁴³

ASM in DRC is an essential livelihood strategy for a lot of communities in the East and South part of the country. The 2002 Mining Code legalised this practice with some specific conditions. Officially, small-scale miners with permit and an official mining card extract the minerals in artisanal mining zones (“Zone d’exploitation artisanale”, ZEA) designated by the Mining Code.⁴⁴ They then should sell

³⁸ *ibid.*, 23

³⁹ Andrés Zaragoza Montejano, 'In Search Of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw, 2013) 8

⁴⁰ Code Minier de la République Démocratique du Congo 2018, art. 71

⁴¹ Perks, 'How can public–private partnerships contribute to security and human rights policy and practice in the extractive industries? A case study of The Democratic Republic of Congo (DRC)' (2012) 257

⁴² *Ibid.* 255

⁴³ *Ibid.* 251

⁴⁴ Cotton and others (2015) 21

the minerals to registered traders that possess an official trading card who themselves sell them to other official traders or trading houses.⁴⁵

Overall those criteria are well neglected for a large set of reasons. Artisanal miners or “creuseurs” very rarely hold the official mining card because they do not get any benefit out of it although it is expensive to get it. Then, there are few ZEA recognised by the Mining Code and those who exist are often located in less mineral rich areas.⁴⁶ The ZEA-status gives very little security to the miners since the government can close those sites within 60 days if it considers industrial mining on that site viable.⁴⁷

Therefore, the small-scale mining mostly takes place in areas where it is prohibited and on industrial concessions in opposition with the Mining Code. Nevertheless, it is tolerated by the State services. Thus, there is a distinction between ASM sites and ASM activities in Large scale industrial mining concessions.⁴⁸

The different concession types, as set by the Mining Code, determine if the mining license is valid for industrial mining, artisanal mining or a combination on the same site.⁴⁹ Indeed, artisanal mining can be operated within an existing industrial license with the written permission of the license holder with the PR, PER and PE status.⁵⁰

Then, very few traders are registered and possess an official trading card in order to avoid taxes imposed on official traders. They buy the minerals directly at or close to the artisanal mines and sell them to trading houses. Likewise, a lot of trader houses are clandestine in order to avoid the taxes on annual registration and export.⁵¹

⁴⁵ International Peace Information Service, 'The Formalisation Of Artisanal Mining in The Democratic Republic Of The Congo And Rwanda' (Center for International Forestry Research 2012) 12-17

⁴⁶ Ibid., 13

⁴⁷ Code Minier de la République Démocratique du Congo 2018, art. 110

⁴⁸ Dorothee Baumann-Pauly, 'Making Mining Safe And Fair: Artisanal Cobalt Extraction In The Democratic Republic Of The Congo' (World Economic Forum 2020) 4

⁴⁹ Susan van den Brink and others, 'Identifying supply risks by mapping the cobalt supply chain' (2020) 156 Resources, Conservation and Recycling

⁵⁰ The different concession types in accordance to the Mining Code are the following:

PE Mining license for industrial mining;

PR Exploration license independent of production type;

PEPM Mining license for semi-industrial mining, mechanized small-scale mining;

PER Mining license for tailings piles or so-called “artificial deposits”;

ZEA ASM zones, license for artisanal mining, mining cooperatives are allocated by SAEMAPE. The responsibility for supervision and inspection lies with the Mining Division and SAEMAPE.

⁵¹ International Peace Information Service, 'The Formalisation Of Artisanal Mining in The Democratic Republic Of The Congo And Rwanda' (Center for International Forestry Research 2012) 12-17

The Mining regulations released in 2003 established two technical services within the Ministry of Mines with a special responsibility for artisanal mining.⁵² Those are the Service for Assistance and Organisation of Artisanal and Small-scale Mining (SAESSCAM) and the Centre for Evaluation, Expertise and Certification (CEEC).⁵³ They are responsible respectively for the support of and the help to create artisanal miners cooperatives, and for the certification and the trade of precious and semi-precious minerals.⁵⁴

The artisanal mining sector raises concern, both for the informal part of that sector as for the more regulated part. Precarious working conditions, child labour, non-respect of health and safety standards and other Human Rights violations are repeatedly reported by media and NGOs. However, ASM is often the only form of livelihood for families living in the region.

On the other hand, the Large scale industrial mining sector (LSM) fails to reduce poverty and violence, profits mostly to foreign companies, take advantage from the fact of being poorly controlled by the State, and often foster corruption. Moreover, they create very few jobs because they rely mostly on heavy machinery⁵⁵

3.3.Gécamines, the State-owned mining enterprise

The Congolese state owns one of the most important enterprises in the mining sector in DRC and more precisely in Katanga, the Gécamines. It is also the biggest contributor to the state budget. Nowadays, it produces copper, cobalt, zinc, nickel and uranium, in such consequent quantities that it is one of the world's leaders in the extraction of those minerals.⁵⁶

It is based in Lubumbashi and is closely linked to the mining context of the former province of Katanga. Historically it was known as the Upper Katanga Mining Union (Union Minière du Haut Katanga, UMHK) created in 1906 during the Belgian colonial period. It was then controlled by Belgian

⁵² République Démocratique du Congo, 'Décret N° 038/2003 Du 16 Mars 2003 Portant Règlement Minier' (2003)

⁵³ International Peace Information Service (2012) 13

⁵⁴ Ibid.

⁵⁵ Benjamin K. Sovacool, 'The precarious political economy of cobalt: Balancing prosperity, poverty, and brutality in artisanal and industrial mining in the Democratic Republic of the Congo' (2019) 6 *The Extractive Industries and Society* 915 political economy of cobalt page 916

⁵⁶ Campbell, *Mining in Africa: Regulation and Development* 209

industries and its activity was copper mining.⁵⁷ In 1966 with the independence of Congo, the UMHK was nationalised and became the actual Gécamines (Société Générale des Carrières et des Mines).

More than just a mining enterprise, it contributed during that period to create a high standard of living in Katanga with its “paternalistic management system”. It created a lot of jobs for the Katangese population and implemented educational, medical and sportive services for the employees and their family. In 1980, the production of copper reached a record of 400 000 tons.⁵⁸ At the same time the whole DRC is experiencing an impressive economic take-off but that is combined with an increase of massive and generalised corruption.⁵⁹

But starting from 1990, an economic crisis hit the country and Gécamines underwent a significant setback.⁶⁰ A combination of general and financial mismanagement, corruption, lack of investment in new activities for Gécamines and the general political climate⁶¹ resulted in the fact that the enterprise was producing barely 20 percent of the amount it used to produce and almost went bankrupt.⁶² Because of the dependency of the population of Katanga on Gécamines, it severely affected the whole region and brought a socio-economic transformation in the region with a rise of poverty.⁶³ The second war of Congo and the copper prices crisis lasted until early 2000.

The World Bank brought funds to Gécamines and imposed strict requirements, for example to reduce the number of workers. At the end of the second war of Congo and the start of Kabila’s presidency in 2003, the Mining Code, drafted in large parts by the World Bank, was then signed. Here, it was stated that Gécamines was going to change from a public enterprise towards a private enterprise. Therefore, the enterprise was restructured and started a process of privatisation; 10 000 out of the 25 000 employees left Gécamines, with modest compensation.

Even with that restructuration, the company still could not afford to operate all its concessions. Thus, it contracted with foreign small-scale mining companies, which themselves were in charge of the security of their workers and had the responsibility for the extraction. With that subcontracting, some former

⁵⁷ Cotton and others (2015) 6

⁵⁸ Ibid., 35

⁵⁹ Ibid., 7

⁶⁰ Campbell, *Mining in Africa: Regulation and Development* 209

⁶¹ Andrés Zaragoza Montejano, 'In Search of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw 2013) 9

⁶² Perks, 'How can public–private partnerships contribute to security and human rights policy and practice in the extractive industries? A case study of The Democratic Republic of Congo (DRC)' (2012) 255

⁶³ Bonnie Campbell, editor (2009) 209

Gécamines miners came back to the same mines without incurring additional costs of employers' contribution for the company.⁶⁴

In 2010, Gécamines became a Private Commercial Company under the direction of businessman Albert Yuma, with the Congolese state as sole shareholder

Nowadays, it possesses approximately 30 000 of mining concessions, which for the major part are exploited by other foreign companies that lease them under joint-venture agreements.⁶⁵ Gécamines is involved in most of the mining exploitation projects in Katanga through collaborations between Gécamines and foreign enterprises.⁶⁶

4. Mining in the Katanga region : The Copper-Cobalt sector

4.1. The Copperbelt and the general context in the Katanga region

The region of Katanga, nowadays divided into the provinces of Tanganyika, Haut-Lomami, Lualaba and Haut-Katanga, has historically been a very important mining area. As said above, the Copperbelt crosses the region. Therefore, the minerals extracted are copper, cobalt, manganese, limestone, uranium and coal.⁶⁷ Currently, the region holds approximately 30 000 km² of mining concessions and these revenues represent a huge part of the DRC economy. Some call Katanga the “economic lung” of the country and more than 150 mining companies are operating in the region.⁶⁸ The main ones that are exploiting Cobalt are Mutanda Mining (Glencore), TFM, ENRC, etc. Gécamines is a stakeholder up to 20 percent and 40 percent in many of those mining projects.

Cobalt is mined as a byproduct of Copper. The reserves of cobalt in the region are estimated to be of 3.400.000 ton, which is 42,7 percent of the world's reserve and a huge part is not yet exploited.⁶⁹ It makes DRC the world's leading cobalt producer with over 50 percent of the world's cobalt production while no other country amounts to six percent.

⁶⁴ Ibid. 214

⁶⁵ Perks (2012) 255

⁶⁶ Zaragoza Montejano (2013) 9

⁶⁷ Perks (2012) 255

⁶⁸ Bonnie Campbell, editor (2009) 213

⁶⁹ Cotton and others (2015) 20

From that production 15-20 percent is estimated to be extracted by artisanal miners.⁷⁰ However, it is difficult to establish an exact proportion because of its informal and often illegal character and the difficulty of tracing cobalt. Cobalt both from artisanal and industrial mining are processed together and as we have seen here above, some large scale industrial mining operators tolerate or hire artisanal miners in their concessions.⁷¹

Artisanal mining developed in an extensive way in the region for some different reasons. In opposition to other regions, Cobalt in the Copperbelt is abundant in surface deposits in thin layers which facilitates mining with basic instruments for the “creuseurs” (diggers).⁷² Moreover, after the economic crisis of 1990 and the restructuring of Gécamines, many workers got engaged in artisanal mining or related trades as principale source of livelihood. With the reform of 2003, many foreign mining companies arrived in Katanga. The population was hoping that those private actors would take over the role that Gécamines had taken in the past of creating an infrastructural program, roads, medical and educational services, etc. In addition to the public services, they were hoping for employment. However, the larger scale industrial mines do not need as many workers as artisanal mines and while some communities closeby mining sites benefited from some social projects, it largely remained inadequate and insufficient.⁷³

4.2. The use of Cobalt

Cobalt is an essential material used in rechargeable lithium-ion batteries. It is an essential component for the technological devices sector (computers, phones, etc) as for the electrical mobility sector.

Our modern society, the rise of digital devices and electronics and the transition towards a “low-carbon economy” generate an impressive growth in demand for many mineral resources including Cobalt.⁷⁴

The increase in electric vehicle adoption has been happening for some years and is especially fostered by the Paris Agreement of 2016 and the European Green Deal adopted in 2019. According to Eurasian

⁷⁰ C. Banza Lubaba Nkulu and others, 'Sustainability of artisanal mining of cobalt in DR Congo' (2018) 1 Nat Sustain 495, 1

⁷¹ *ibid.* 9

⁷² *ibid.* 2

⁷³ Bonnie Campbell, editor (2009) 225

⁷⁴ Sovacool, 'The precarious political economy of cobalt: Balancing prosperity, poverty, and brutality in artisanal and industrial mining in the Democratic Republic of the Congo' precarious political economy of cobalt, intro

Resources Group (2018), the cobalt demand for electric vehicles batteries is going to increase by 200 percent by 2020 and by 500 percent by 2025.⁷⁵

Banza Lubaba Nkulu et al., 2018, noted already in 2017 that more than 50 percent of the world's Cobalt was going to batteries (for smartphones, laptops, electric vehicles) with DRC being the supplier of 60 percent of it.⁷⁶

Mostly in China and in the global North, electric mobility is skyrocketing; More and more countries are implementing legislation in favour of electric mobility. Accordingly, the prices for Cobalt have been soaring since 2017 while the demand is still rising, which led to name cobalt the “hottest commodity of 2017”. Likewise, a mining boom of the minerals needed for modern technologies and batteries has been underway for some years.

There are different types of batteries but the Lithium-Ion batteries are expected to dominate the market at least for the next decade.⁷⁷ Other alternatives for rechargeable batteries not based on Cobalt or needing less cobalt are being developed and tested, yet the demand will strongly rise in the future.⁷⁸ Lithium-ion batteries (or Li-ion) have a superior energy, power density and cycling ability according to the Cobalt Institute (2019) in comparison to nickel-based batteries.⁷⁹ Different technologies are used for the Li-ion batteries two of which are the lithium-cobalt oxide (LCO) battery mainly used for portable devices because of its long run time and the lithium-nickel-manganese-cobalt-oxide (NMC) battery that contains 20 percent of cobalt and is mainly used for electric cars because of their high cycling rate, long-life, and high power.⁸⁰

The common thread of all those lithium-ion batteries is cobalt, which demand has increased impressively since 2007 with the arrival of smartphones, wireless electrical devices and thus more performant batteries.⁸¹

⁷⁵ Eurasian Resources Group, 'The ERG clean cobalt framework: our commitment to responsible production' (2019).

⁷⁶ Banza Lubaba Nkulu and others, 'Sustainability of artisanal mining of cobalt in DR Congo' (2018)

⁷⁷ Alejandro González and Esther de Haan, 'The Battery Paradox: How The Electric Vehicle Boom Is Draining Communities And The Planet' (SOMO 2020) 8-9

⁷⁸ Sovacool, 'The precarious political economy of cobalt: Balancing prosperity, poverty, and brutality in artisanal and industrial mining in the Democratic Republic of the Congo'

⁷⁹ 'Lithium-Ion Batteries | Cobalt Institute' (*Cobaltinstitute.org*, 2021) <<https://www.cobaltinstitute.org/lithium-ion-batteries.html>> accessed 2 June 2021

⁸⁰ Maurizio Malpede, 'The Dark Side of Batteries: Education, Fertility and Cobalt Mining in the Democratic Republic of Congo' (2020) SSRN Electronic Journal p. 8.

⁸¹ *ibid.*, 9

4.3. The Cobalt supply chain: its track in the DRC

The processing steps of the cobalt ores after extraction by artisanal miners in the Katanga Copperbelt are their crushing, washing, separation and screening. If the ores are only crushed and/or washed, they are classified as crude or unprocessed when sold. If they are screened and/or separated they are classified as pre-concentrate, and if all steps taken are carried out, they are then classified as concentrate.

After that first processing, the surplus and the waste rock are dumped and form tailings without much consideration for environmental protection.

The ores sold to buyers directly at the mines or to trading houses or “depots” where the price is determined in function of the metal content and the weight of the ore determined by a "Metorex" device - obviously in the hands of the buyer.

Thus, the production and the first sale of the ores, mostly on site, are the first steps of the Cobalt supply chain. Further, if the ores are first bought by a “négociant” (mobile buyer) that accumulate, prefinance the artisanal miners and transport the products (often via informal trade relationships), they are then brought to “dépôts” or open markets that purchase artisanal production. The latter consist of a cluster of dépôts where the sales take place mostly without official contracts and without knowing the ores’ origin. Most of the dépôts are owned by chinese people and some claim that they fudge the scales and do not give fair prices. Those warehouses then process the ores into concentrates with mineralogical or metallurgical techniques but often do not have the pyro- or hydrometallurgical capacity to further process them. The last step in the domestic congolese cobalt supply chain are the refineries, smelters and exporters that finish the processing (pyro- or hydrometallurgically) and thus fulfill the legal basis to export the material. Those processes are in the hands of mainly foreign companies and factories. They process both products from artisanal origin and from their own industrial concessions, so that mixing occurs.⁸²

It happens frequently that artisanal miners extract the raw Cobalt ore that is then stored in bags, unsorted and unprocessed, and sent in that form directly towards China. Generally speaking, DRC does not export manufactured products ready to use by the large companies selling batteries in the world.

⁸² van den Brink and others, 'Identifying supply risks by mapping the cobalt supply chain' (2020) 27-32

Instead, it exports a mining product that has to be further processed.⁸³ This is a missed opportunity for DRC and a loss of potential revenues. However, structural problems in DRC and lack of basic technology needed for refining prevent them from further processing and refining its minerals, at least at the moment.

Thus, the final transformation into cobalt metal and the further manufacturing of products with the Katangese Cobalt takes place mainly in China by refiners. The world's most important refiner is Huayou (head office of CDM, Jinchuan, GEM, etc). Most of the companies using cobalt in their batteries have their plants there. Nowadays, 60 percent of the refined cobalt in the world is produced in China. It is the case of Panasonic, Samsung SDI, LG Chem and Amperex Technology Limited concerning the rechargeable battery producers. These companies have been found by a report made by SOMO to fail respecting due diligence directives and are unaware of the source of the cobalt used in their products.⁸⁴

5. Issues linked to the Cobalt sector in Katanga

5.1. The working conditions in the Katangese mines

The cobalt production coming from artisanal mining is estimated to be 15-20 percent of the total production in the DRC.⁸⁵ This accounts for approximately 10 500 tons of Cobalt in 2015. Around 80 copper-cobalt artisanal mines have been mapped by the BGR in the Katanga region.⁸⁶ Moreover, the current estimation of the number of artisanal miners in Katanga is 200 000 to 250 000 persons.⁸⁷

Since the year 2000, artisanal mining has seen a new rise in Katanga, whereas during the previous decades it was mostly industrial exploitation. Cobalt is not considered a “conflict mineral”, however it is also subject to numerous risks and grievances. Global Witness estimated in 2006 that tens of

⁸³Ruée Mondiale Vers Le Cobalt Congolais: La Chine, Médaille D'or' (*ladepeche.fr*, 2018) <<https://www.ladepeche.fr/article/2018/02/21/2746759-ruée-mondiale-vers-cobalt-congolais-chine-medaille-or.html>> accessed 1 May 2021.

⁸⁴ten Kate A, and Kiezebrink V, 'Responsible Mining: Cobalt' (the GoodElectronics Network 2016) 2

⁸⁵ van den Brink and others, 'Identifying supply risks by mapping the cobalt supply chain' identifying supply risks page 2

⁸⁶ *ibid.*, 3

⁸⁷ Thierry De Putter and others, *Mining the Katanga (DRC) Copperbelt: geological aspects and impacts on public health and the environment—towards a holistic approach* (2011)

thousands of young people including children were working as diggers in Katanga.⁸⁸ Their working conditions are poorly regulated, often precarious and hazardous, lacking any safety equipment. Long working days, in confined spaces, underground and exposed to hazardous substances. Journalists and the civil society repeatedly try to highlight and draw attention to these problems. The NGO Global Witness for example investigates extensively the deplorable working conditions of artisanal mining calling it ‘the tragedy of the miners’. They highlighted the child labor, the absence of safety measures and equipment, the contamination risks, the lethal accidents and the living and working conditions of the miners.⁸⁹

The question of consuming responsibly is also gaining more attention over the last years for the consumers at the end of the chain.⁹⁰ Even though regulations exist in DRC on health, security and safety at work and the Mining Code contains specific provisions regarding artisanal mines, few miners have any knowledge of them.⁹¹

Concerning safety, miners dig in tiny pits without much coordination or knowledge of previous exploitation and stability. In the Copperbelt, artisanal mining occurs both in open pit mines as in underground tunnels and extraction wells. Moreover, tailings and artificial deposits from former industrial exploitation are also mined.⁹² Under the ground, tunnels are often longer than 30 meters (in contradiction with the law) often without benches that improve the security. The risk of tunnel collapse or of falling in vertical shafts are important. Mostly in the old tailings, the risk is enhanced because of their instability and insufficient compacted and solidified material. In addition, the danger of suffocation due to those collapses or due to the insufficient ventilation increases as the tunnels are deeper. During the rainy season, the danger of landslides, which is the first cause of death, is permanent, while the dry season brings very dusty working conditions.⁹³ Open-pits mining already carries a reduced risk and their amount is thus rising.

⁸⁸ C. L. Banza and others, 'High human exposure to cobalt and other metals in Katanga, a mining area of the Democratic Republic of Congo' (2009) 109 *Environ Res* 745, 746

⁸⁹ Bonnie Campbell, editor (2009) 210

⁹⁰ van den Brink and others, 'Identifying supply risks by mapping the cobalt supply chain' 4

⁹¹ Nicolas Tsurukawa, Siddharth Prakash and Andreas Manhart, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo' 27

⁹² Bonnie Campbell, editor (2009) 39

⁹³ van den Brink and others, 'Identifying supply risks by mapping the cobalt supply chain' 39

The number of accidents and deaths are hard to determine as there is no official reporting and the counts are far below reality.⁹⁴

Different NGOs reported on the deaths occurring in the artisanal mines. Amnesty International in 2016 reported that in a year, 72 artisanal miners died in underground incidents and collapsed tunnels.⁹⁵ But the death toll is higher because of the diseases contracted by the miners in relation with their living- and working-conditions as well as their exposure to Cobalt.

Furthermore, most artisanal miners do not benefit from social and employment security since they are enrolled in informal employment. Their wage is often less than 5\$ per day, which represents the minimum wage.⁹⁶

Another major issue in the region is the violence between security guards of industrial mining concessions and illegal artisanal miners that sneak in those concessions to dig there. Illegal miners often get shot down by the security guards or the mining police who try to prevent them from entering these private concessions. In 2019, Afreewatch (African Resources Watch) reported that the DRC government had asked the army to expel the artisanal miners from the Tenke Fungurume (TFM) and the Kamoto Copper Company (KCC) in Kolwezi, ownership of China Molybdenum Company Limited (CMOC) and Glencore International AG (Glencore) respectively. They proceeded then to forced evictions and destroyed homes in two villages.⁹⁷ The intrusion of artisanal miners on industrial concessions, which is considered as theft of the property of industrial concessionaires, is hard to prevent or control for the companies. For those companies, it is also a risk of contamination of the supply chain with illegal cobalt. furthermore, accidents of illegal miners (from which the risk is very high due to the unsafe and illegal working conditions) on their concessions have an impact on their reputation.⁹⁸

In the mining towns of Lubumbashi, Likasi and Kolwezi, mining incomes have become one of the only livelihoods for workers. For thousands of people there is no other accessible work than artisanal

⁹⁴ Tsurukawa, Prakash and Manhart, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo' 28

⁹⁵ Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016).

⁹⁶ van den Brink and others, 'Identifying supply risks by mapping the cobalt supply chain' 42

⁹⁷ Amnesty International, 'République Démocratique Du Congo. Il Faut Trouver Des Solutions Pérennes À La Situation De Crise Dans Les Mines' (Amnesty International Ltd 2019).

⁹⁸ van den Brink and others, 'Identifying supply risks by mapping the cobalt supply chain' 5

mining.⁹⁹ In their context of extreme poverty, unemployment, high disorganisation and a poorly diversified economy, Katanga's mining potential is seen as the main solution, even if it profits very little to the local population.¹⁰⁰ Artisanal mining provides more jobs than the industrial mining sector that is relying on foreign workers, whether coming from the country of origin of the corporation, or originating from neighbouring English-speaking countries (Zambia, Zimbabwe, South Africa), which makes it easier for the corporation to communicate with their workers.¹⁰¹

In the short and at least the medium term, artisanal mining will continue. Therefore, the sector needs more regulations and the introduction of sustainable and responsible practices.¹⁰²

5.2. Child labour

The Mining Code of DRC expressly prohibits minors to work under its article 26, allowing only Congolese citizens of age to work as artisanal workers.¹⁰³ It is estimated that between 19 000 and 30 000 children under 15 and between 9 000 and 15 000 children between 15 and 17 are working in the Copperbelt mines, which would amount in total for 42 percent of the workforce. In its report of 2016, SOMO, the Centre for research on Multinational Corporations estimated an amount of 40 000 children working in underground tunnels.¹⁰⁴ They are then hired to dig into the narrowest tunnels, are engaged in that transport or the sorting, washing and sieving of the ores.¹⁰⁵

However, the implication of children in the mines does not mean they do not attend school. On the contrary, their involvement is often to be able to afford school fees and occurs before and after school, during weekends and school holidays.¹⁰⁶

⁹⁹ De Putter and others, *Mining the Katanga (DRC) Copperbelt: geological aspects and impacts on public health and the environment—towards a holistic approach*

¹⁰⁰ Bonnie Campbell, editor (2009) 210

¹⁰¹ comments collected during an interview with Colette Braeckman

¹⁰² van den Brink and others, 'Identifying supply risks by mapping the cobalt supply chain' 5

¹⁰³ Tsurukawa, Prakash and Manhart, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo' 31

¹⁰⁴ ten Kate A, and Kiezebrink V, 'Responsible Mining: Cobalt' (the GoodElectronics Network 2016)

¹⁰⁵ Tsurukawa, Prakash and Manhart, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo' 32

¹⁰⁶ *ibid.* 33

5.3. The environmental impact of Cobalt mining

The amount of industrial mining sites in the region of Katanga produces a significant amount of waste which moreover contains metallic trace elements (MTE) that are chemical elements extremely difficult to degrade and toxic even in little quantities.¹⁰⁷ Numerous studies in Katanga have shown their presence in abnormally high quantities in water, soil, air, human hair, blood, urine and in various aquatic species.¹⁰⁸ The MTE's cause a big harm to the environment, impacting terrestrial and aquatic life and polluting water and streams. The industries dump their waste into streams and soil without prior treatment, without installing connected factories for the treatment of industrial waste, resulting in contamination of groundwater. The effects of water pollution do not only impact the communities living in the vicinity, but also communities living hundreds of kilometers downstream.¹⁰⁹ Several studies conducted in different villages of Katanga analysed water samples collected in different points and concluded that their content in dangerous trace elements was way beyond the accepted limits established by the WHO. Studies also showed how heavy metals had entered the food chain and were to be found in vegetables and soil of the area.¹¹⁰ In the study of Bastien Lange et al., 2016, the researchers found accumulation of Copper and Cobalt in plant leaves at exceptionally high levels, only to be found in the Copperbelt in Central Africa.¹¹¹

Cadmium and Arsenic released in the streams have a reprotoxic effect. Uranium ores that are really dangerous are also very present in the region, mostly in the Southern part of the Copperbelt where cobalt ores are associated with uranium in high concentration. It exposes the miners to radiations that are way over the recommended dose limits (24 mSv/year instead of 20 mSv/year for normal radiation workers).¹¹²

Three different types of waste associated with mineral and metallurgical processes are to be found: the steriles from the mines (waste rocks from the underground or surface mining), the tailings (waste from mineral processing plants) and the slags (wastes from smelters). In its study of 2018, Arthur Tshamala

¹⁰⁷ Arthur Tshamala Kaniki and Kaniki Tumba, 'Management of mineral processing tailings and metallurgical slags of the Congolese copperbelt: Environmental stakes and perspectives' (2019) 210 *Journal of Cleaner Production* 1406, 2

¹⁰⁸ R. A. Mukendi and others, 'Exposure of man to metal trace elements and alteration of sperm parameters: study conducted in the mining areas of Haut-Katanga in the Democratic Republic of Congo' (2018) 30 *Pan Afr Med J* 35 page 6

¹⁰⁹ Andrés Zaragoza Montejano, 'In Search of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw 2013) 10

¹¹⁰ *Ibid.* 11

¹¹¹ B. Lange and others, 'Copper and cobalt accumulation in plants: a critical assessment of the current state of knowledge' (2017) 213 *New Phytol* 537

¹¹² Tsurukawa, Prakash and Manhart, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo' 29

Kaniki, researcher from the department of chemical engineering at the university of Lubumbashi highlighted the fact that most of these mine waste is stored under non-environmental friendly conditions.¹¹³ They are moreover considered as “sterile” while they still contain high concentrations of minerals and could be further exploited. On the contrary, they are left unprotected, polluting the environment with their dust that spreads around and settles in the soil, the rivers and the surroundings. Wrapping the embankments with geomembranes would be a great advance, but no company takes that initiative.¹¹⁴

Industrial pollution is an issue that is nowadays experienced in a substantial amount in developing countries where moreover few legislation or technical measures are decided to reduce them while most of the research about it is done in developed countries. The discharge of pollutants from mines in Africa is barely or not controlled which induces a severe contamination of air, water, soil and vegetation with toxic substances in the mining areas.¹¹⁵ The Congolese legislation for the mining sector does have an article obliging companies to make sure they don't pollute water sources as part of their operations, nevertheless, the problem subsists in the application and the control of the law.¹¹⁶

Regarding artisanal mining, it also leads to pollution through the spillage from bags hoisted from the pits and mainly by the washing of the ores in local water courses also used for personal hygiene, cooking and even drinking. that surface water pollution occurs despite article 10 of the Mining Regulation that goes as follows: “Artisanal miners are required to avoid pollution of water resources used in agriculture, livestock rearing or for consumption.”¹¹⁷

Moreover, metal furnaces of artisanal mines are built close to residential areas without care of environmental or health issues. In the Study of Banza Lubaba Nkulu et al. 2019, the surface dust concentrations collected in Kasulo, the artisanal mining site of Kolwezi were containing 70 times more

¹¹³ Kaniki and Tumba, 'Management of mineral processing tailings and metallurgical slags of the Congolese copperbelt: Environmental stakes and perspectives'

¹¹⁴ Colette Braeckman, 'Congo : Le Cobalt, Désastre Écologique Et Sanitaire' *Le Soir* (2020).

¹¹⁵ Banza and others, 'High human exposure to cobalt and other metals in Katanga, a mining area of the Democratic Republic of Congo' 746

¹¹⁶ Andrés Zaragoza Montejano, 'In Search of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw 2013) 3

¹¹⁷ Tsurukawa, Prakash and Manhart, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo' 40

cobalt (1,100 µg/g) and 13 times more uranium (2 µg/g) than in the control area.¹¹⁸ This exceeded by far the Canadian standard for surface soil for residential property use of 22 µg/g cobalt.¹¹⁹

The World Bank in 2007 had exposed in a special report on artisanal mining that its environmental impacts included air pollution through emissions and discharges, changes in river ecology, soil erosion, deforestation, land instability, biodiversity loss and destruction of natural habitats.¹²⁰

5.4. The social impacts of Cobalt mining

Not only the environmental impact of mining in Katanga has to be stressed. Social problems arise from the mining context and the increase in artisanal mining. Precarious housing, lack of sanitation and hygiene, promiscuity, high drugs and alcohol consumption, prostitution and fights are all problems present in the region.¹²¹

If artisanal workers live in camps close to the mines, the living conditions, the hygiene and sanitation are really low. The drinkable water is of very poor quality, no waste system is organised. Therefore, the state of health amongst the miners' community is bad and a substantial amount of problems including reduced life-expectancy, higher child mortality rate, high prevalence of HIV, hepatitis, meningitis, cholera, typhoid, tetanus, malaria, typhus, tuberculosis, yellow fever, musculoskeletal disorders as well as respiratory disorders are recurrent.¹²²

Concerning the impact of Cobalt mining on the education, a study was made by Maurizio Malpede in 2020¹²³ that provided evidence that exposure to cobalt mining activity during childhood, and mostly in artisanal mines because of lack of labor supervision, resulted in lower education attainment later in life and less school attendance in general. The results were strictly associated with cobalt mining rather than other types of mines because their jobs in cobalt mines consist mostly of washing the mineral rather than underground mining.¹²⁴

¹¹⁸ Banza Lubaba Nkulu and others, 'Sustainability of artisanal mining of cobalt in DR Congo' 3

¹¹⁹ Tsurukawa, Prakash and Manhart, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo's mining, 4

¹²⁰ Sovacool, 'The precarious political economy of cobalt: Balancing prosperity, poverty, and brutality in artisanal and industrial mining in the Democratic Republic of the Congo' 929

¹²¹ Banza Lubaba Nkulu and others, 'Sustainability of artisanal mining of cobalt in DR Congo' 8

¹²² Tsurukawa, Prakash and Manhart, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo' 28

¹²³ Malpede, 'The Dark Side of Batteries: Education, Fertility and Cobalt Mining in the Democratic Republic of Congo'

¹²⁴ *ibid* 32

5.5. The adverse effects of Cobalt mining on human health

The long mining history of Katanga has as a consequence that minerals, especially Cobalt and Copper ores, have been brought to the surface and have dispersed into the environment. Uranium and other trace elements are often associated with Cobalt and have therefore also been dispersed in the surroundings.¹²⁵ The poor working conditions of artisanal workers and the overall pollution in the surroundings of the mining sites generate health problems in the population of the region of Katanga.

Cobalt in high quantities in the body may have harmful effects on the heart, the lungs, the blood and the thyroid. Moreover, uranium that is often associated with it has nephrotoxic and neurotoxic effects.¹²⁶

In 2017, a review about cobalt toxicity (Leysens et al., 2017) described the various adverse health effects that excessive exposure to cobalt could induce.¹²⁷ It was already established by Finley et al., 2012a that lower Cobalt blood concentrations (around 300 µg/l) are associated with reversible hematological and endocrine issues, while higher Cobalt levels (> 700 µg/l) are associated with more severe effects, for example neurologic and cardiac symptoms.¹²⁸ Thus, the health effects of excessive cobalt exposure are a complex clinical syndrome which can be manifested in a varying set of deficits. The effects of Cobalt accumulations on the cardiovascular system can result in damage of the myocardial function and a reduced left ventricular systolic function and left ventricular hypertrophy. Neurologically, it can result in impairments on the hearing and the balance, the vision, the cognitive function, the sensory and motor performances and in some cases polyneuropathy. However, if the exposure to cobalt is stopped, those symptoms can be reversible. The contrary occurs with the hard-metal lung disease or pneumoconiosis which is the name given to the respiratory effects due to inhalation of amongst other metals, Cobalt dust. Indeed, the progression of the disease often continues after the cessation of the exposure to cobalt. Concerning the endocrine system, cases of chronic thyroiditis, hypothyroidism and a reduced thyroid volume have been described. Also, the skin can suffer from its contact with cobalt generating occupational contact dermatitis (OCD). And finally, the combination of Cobalt and Tungsten carbide is considered carcinogenic.

¹²⁵ De Putter and others, *Mining the Katanga (DRC) Copperbelt: geological aspects and impacts on public health and the environment—towards a holistic approach* (abstract)

¹²⁶ Banza Lubaba Nkulu and others, 'Sustainability of artisanal mining of cobalt in DR Congo' 8

¹²⁷ L. Leysens and others, 'Cobalt toxicity in humans-A review of the potential sources and systemic health effects' (2017) 387 *Toxicology* 43

¹²⁸ Finley, B.L., Monnot, A.D., Gaffney, S.H., et al., 2012a. Dose-response relationships for blood cobalt concentrations and health effects: a review of the literature and application of a biokinetic model. *J. Toxicol. Environ. Health B Crit. Rev.* 15 (8), 493–523.

In the Katanga Copperbelt (KC), many areas have a Cobalt concentration in the rivers, air and soil above limits set by national agencies for environment protection. Analysis indicate that the main human ways of exposure to Cobalt are ingestion of contaminated dust (mainly significant for children) and dietary cobalt intake via contaminated vegetables, cereals, fish, etc.

Research has been done on the impact of the mines of the region on health problems that are recurrent and scientific papers have been issued. In particular, the research team of Professor Banza and Paul Musa from the Unit of Toxicology and Environment of the University of Lubumbashi in collaboration with Professor Benoit Nemery doctor-toxicologist at the KULeuven Department of Public Health and Primary Care.

In their study of 2009 (Banza et al, 2009), they assessed the exposure to metals in the population of Katanga by comparing 315 subjects living in one of the ten selected mining areas (0 to 10 km from mines or smelting plants) with 40 control subjects living 400km outside that area, in Kamina. The urinary concentration of different metals was calculated and for all of them except Nickel, their concentration was significantly higher in subjects living in the mining area. Urinary Cobalt excretion was found of an average of 17,1 $\mu\text{g/g}$ creatinine, exceeding for 53 percent of the subjects the occupational exposure limit value of 15 $\mu\text{g/L}$ (considered here as 15 $\mu\text{g/g}$ creatinine) from the American Conference of Governmental Industrial Hygienists (ACGIH). Moreover, 87 percent of the children living in the mining areas had values for urinary cobalt concentration exceeding that maximum level. Those concentrations are the highest ever reported for a population. The effects on the health were then not clear yet and needed to be further investigated.¹²⁹

In Banza Lubaba Nkulu et al., 2018,¹³⁰ the researchers also found higher levels of Cobalt in blood and urine in people living on an artisanal mining site, compared with people living in a nearby control area. Especially children were heavily contaminated while they were not even working in the mines. The concentrations were exceeding by much the occupational exposure value of the ACGIH (up to 193 $\mu\text{g/g}$ creatinine for children and 133 $\mu\text{g/g}$ creatinine for miners). The case study was focused on people living in Kasulo, an urban neighbourhood of Kolwezi that had been transformed into an artisanal mine, after finding Cobalt in the underground of a house. Moreover, evidence of oxidative stress and thus

¹²⁹ K. Cheyns and others, 'Pathways of human exposure to cobalt in Katanga, a mining area of the D.R. Congo' (2014) 490 *Sci Total Environ* 313

¹³⁰ Banza Lubaba Nkulu and others, 'Sustainability of artisanal mining of cobalt in DR Congo' (2018)

DNA damage as well as high uranium rates was found in exposed children. Highly significant correlations were found between the Cobalt amount in surface dust and its urinary and bloody levels in the exposed population. This highlights that dust exposure is an important source of cobalt intake, more than contamination of drinking water. Nowadays, inhabitants of Kasulo were forced to leave the site with low indemnities after it had been sold to Congo DongFang Mining (CDM).¹³¹

In the same year, another study (Richard-A-Mutshimbe Mukendi et al., 2018) was conducted to determine the quality of sperm and spermatozoa in relation with the urinary concentration of arsenic and cadmium (reprotoxic trace metals that are present in abnormally high concentrations in Katanga) in men living in mining areas in Haut-Katanga. Hundred men were recruited, half of them living in the villages around the upper Lufira basin where used water containing trace metals are rejected without treatment from the Copper and Cobalt industries of Likasi, the other half living far away from any mining zone. The results showed arsenic and cadmium urinary concentrations respectively 9 and 2 times superior than normal values for people living in the area polluted by mining exploitation. Moreover, while the arsenic and cadmium concentration rises, the pH of semen loses its alkalinity, which alters fertility. The amount and mobility of spermatozoids was strongly altered and the number of abnormal spermatozoids was increasing in proportion with the arsenic and cadmium concentration rise.¹³²

Based on these findings, Musa Obadia P, Kayembe-Kitenge T, Banza Lubaba Nkulu C, et al., 2019 investigated the association between erectile dysfunction and mining-related jobs.¹³³ They compared 42 men buying painkillers with 42 men buying Sildenafil, used to treat erectile dysfunction, in Lubumbashi less than 3km from a Cobalt mine. The results showed that the proportion of mining related jobs was higher among men buying Sildenafil (45 percent of them compared to 17 percent for painkiller buyers) and was higher among men with erectile dysfunction (54 percent of them compared to 5percent among men without). Sildenafil buyers were four times more likely to have mining related

¹³¹ *ibid.* 8

¹³² Mukendi and others, 'Exposure of man to metal trace elements and alteration of sperm parameters: study conducted in the mining areas of Haut-Katanga in the Democratic Republic of Congo'

¹³³ P. Musa Obadia and others, 'Erectile dysfunction and mining-related jobs: an explorative study in Lubumbashi, Democratic Republic of Congo' (2020) 77 *Occup Environ Med* 19

jobs compared to men buying painkillers. The study overall showed that working in mining related jobs may be associated with erectile dysfunction.¹³⁴

The incidence of congenital malformation in Lubumbashi was analysed in 2019 amongst 62 238 newborns born across different maternities of the cities.¹³⁵ The incidence of malformation was 1.6 higher for newborns in maternities close to mining areas than outside mining areas. The most prevalent birth defects were neural tube defects, lower limb defects, cleft lip or cleft palate and abdominal wall defects. They concluded that high exposure to trace metals and especially Cobalt could play a role in that association of congenital malformation and proximity with mining areas.

In another study (Van Brusselen et al., 2020) comparing 138 newborns with visible birth defects and 108 control babies, it was concluded that mothers having a job outside their home and fathers having a mining-related job were more likely to have children with malformation.¹³⁶ Based on the same date, three cases of Holoprosencephaly amongst the same newborns were analysed in Kayembe-Kitenge et al., 2019.¹³⁷ Holoprosencephaly (HPE) is a structural brain malformation which is the outcome of a failed or incomplete forehead division in the first weeks of gestation. Of the three newborns, high concentration of uranium in urine was found in one mother, high manganese concentration in blood in another and two of the three fathers had a mining-related job. It was hypothesized that the three cases were linked to mining-related pollution and that paternal factors with epigenetic modification in sperm because of occupational exposure to toxic metals were involved.

A follow-up study (Kayembe-Kitenge et al., 2020) reported the first case of Agnathia otocephaly (AOC) in DRC, a rare craniofacial malformation associated with the mutation of genes OTX2 and PRRX1. The newborn's father was an artisanal miner in a copper-cobalt mine at time of the conception and no mutation of the two known genes were found. Instead, higher concentrations than normal (compared to the data of control neonates of Van Brusselen et al., 2020) of cobalt, arsenic, cadmium and uranium were found in the cord blood of the baby. It was thus hypothesized that this case of AOC was possibly related to an exogenous cause namely the father's mining-related job.¹³⁸

¹³⁴ *ibid.*

¹³⁵ Kayembe-Kitenge T and others, 'Incidence Of Congenital Malformations And Proximity To Mining In Lubumbashi, DR Congo' (2019) 3 *Environmental Epidemiology*.

¹³⁶ Daan Van Brusselen and others, 'Metal mining and birth defects: a case-control study in Lubumbashi, Democratic Republic of the Congo' (2020) 4 *The Lancet Planetary Health* e158

¹³⁷ Kayembe-Kitenge T, Kasole Lubala T, Musa Obadia P, et al. Holoprosencephaly: A case series from an area with high mining-related pollution. (2019)

¹³⁸ Kayembe-Kitenge T and others, 'Agnathia Otocephaly: A Case From The Katanga Copperbelt' (2020) 112 *Birth Defects Research*.

A 2004 study of A. Linna brought attention to the effect Cobalt could have on the heart. It acknowledged that higher Cobalt exposure was associated with dilative cardiomyopathy which is a thickened wall of the left ventricle of the heart that makes its relaxation time longer and induces an earlier filling. Their theory is that cobalt deposits in the myocardium induce fibrosis and an increased wall stiffness of the heart which increases the diastolic pressure. The mechanism underlying is probably that cobalt toxicity induces an inhibition of mitochondrial dehydrogenase which in turn leads to the inhibition of mitochondrial dehydrogenase.¹³⁹ Another study (D'Adda and al., 1994) had already reported that accumulation of Cobalt in the myocardium resulted in increased myocardial stiffness. It was not the time of exposure to Cobalt but rather the level of exposure that affected the results. This should encourage them to put the occupational exposure limit lower or to enforce its respect¹⁴⁰

According to Kayembe-Kitenge et al, 2020., a higher exposure to mineral dust and various trace elements enhances the risk of wheezing as a respiratory issue. In that study made amongst stone-crusher (exposed to cobalt) and taxi-driver (control subject) of Lubumbashi, it was found out that being a stone-crusher was associated to wheezing (more prevalent; fourfold increased risk), but that it did not imply a worse pulmonary function (probably because of the physical intensity of their job).¹⁴¹

6. Claims made by the Civil Society

Concerning mining activities, NGOs take action and write reports denouncing the human right violations, the child labour and other non-compliance to occupational regulations occurring in mines. Others take actions for related areas like education, access to water, protection of population and of the environment. The NGOs as such act as whistleblowers, or monitoring bodies that aim to guarantee human rights.¹⁴²

Amnesty International released in 2016, in 2017 and in 2019, reports about the working conditions and the human rights situation in the Cobalt Mines in Katanga. In 2016, "This is what we die for" in collaboration with Afrewatch, reported the working conditions of artisanal miners in the Cobalt sector

¹³⁹ Seghizzi P, D'Adda F, Borleri D, et al. Cobalt cardiomyopathy. A critical review of literature. *Sci Total Environ* 1994;150:105-9

¹⁴⁰ A Linna, 'Exposure To Cobalt In The Production Of Cobalt And Cobalt Compounds And Its Effect On The Heart' (2004) 61 *Occupational and Environmental Medicine*.

¹⁴¹ Tony Kayembe-Kitenge and others, 'Respiratory Health And Urinary Trace Metals Among Artisanal Stone-Crushers: A Cross-Sectional Study In Lubumbashi, DR Congo' (2020) 17 *International Journal of Environmental Research and Public Health*.

¹⁴² Cotton and others (2015) 16

and investigated further the journey of Cobalt through all the supply chain. It pointed out grave human rights violations, child labour and no legal protection for the major part of the artisanal miners as well as the rise of chronic diseases and serious and potentially lethal lung issues. It described the due diligence actions undertaken by 26 enterprises to trace the origin of the Cobalt held in their products.¹⁴³

Almost two years later, “Time to recharge, corporate action and inaction to tackle abuses in the Cobalt supply chain” was released and analysed the progress made by 29 enterprises in regard with due diligence and supply chain control. They concluded that none of those corporations was exercising its due diligence duty regarding human rights on its cobalt supply chain in accordance with international standards. Moreover, while the extraction of raw materials takes place in DRC, however manufacturers of battery materials and cells are mainly in China and until they comply with international due diligence standards, it cannot be said that enterprises have “clean’ cobalt.”¹⁴⁴

Then, after the accident killing 43 diggers in Kolwezi, Amnesty published in 2019 a public declaration to find long-term/lasting solutions to the mining situation in Katanga. It claimed to find a real solution to the tension between illegal artisanal miners digging in industrial concessions and the multinationals that use military assistance and violence to kick those miners out. Instead of prohibiting or expelling artisanal “creuseurs”, the DRC authorities and the industrial corporations should go to the heart of the problem and actively work together to create regulated, licensed, safe and profitable artisanal mining areas (ZEA).¹⁴⁵

Several other organizations, like the center for Research on Multinational Corporations (SOMO), an independent organisation that work on issues related to sustainable development and investigates the consequences of multinational activities for people and the environment, GoodElectronics, Afreewatch, Resource Matters and many more published different reports which content will be discussed further. All organisations make some recommendations to the DRC government and to the enterprises along the battery value chain at the end of their reports.

¹⁴³ Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016)

¹⁴⁴ Amnesty International, 'Democratic Republic Of The Congo: Time To Recharge: Corporate Action And Inaction To Tackle Abuses In The Cobalt Supply Chain' (Amnesty International Ltd 2017).

¹⁴⁵ Amnesty International, 'République Démocratique Du Congo. Il Faut Trouver Des Solutions Pérennes À La Situation De Crise Dans Les Mines' (Amnesty International Ltd 2019).

Chapter 2: Analysing the Right to Health and its implementation in Katanga

The violations of the rights to health in the cobalt mines and in the region, occur under human rights obligations that arise from different legal frameworks. In this part, we are going to analyse the different legal instruments around the right to health and the responsibility it implies for different actors likely to be involved in the health issues described previously.

At first we will present the obligations coming from international law and international human rights law. Then the right to health will be analysed at international and regional level and its implication for the DRC in national implementation. Finally, we will discuss the right to health in the context of safety at work in the DRC.

1. The recognition of the human right to health

The Human right to health is recognised in several documents, in international, regional and national level in the constitution of the DRC.

1.1. Recognition at the international level

The right to health or more precisely “The right to the enjoyment of the highest attainable standard of physical and mental health” was at first stated in the Constitution of the World Health Organization (WHO) in 1946, as part of international law. In the preamble, health is defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.¹⁴⁶ However, the States are not responsible for every possible cause of human ill health or disease, but that they have to ensure the enjoyment of the highest attainable standard of health without distinction of race, religion, political belief, economic or social condition, which is more realistic and makes an important difference between that and health.¹⁴⁷

The Democratic Republic of Congo signed the WHO Constitution in February 1961.

The right to the enjoyment of the highest attainable standard of health was then mentioned in the Universal Declaration of Human Rights from 1948 as part of article 25 (right to an adequate standard of

¹⁴⁶ Constitution of the World Health Organization (preamble)

¹⁴⁷ Dady Mumbanika Mbwisi, 'The Protection of the right to health under the Constitution of the Democratic Republic of Congo' (2014) 47 *Verfassung und Recht in Übersee / Law and Politics in Africa, Asia and Latin America* 434, 437

living) and acknowledged as a full human right in the 1966 International Covenant on Economic, Social and Cultural rights (ICESCR) in article 12. That article states

“1. The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.

2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for:

(a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child;

(b) The improvement of all aspects of environmental and industrial hygiene;

(c) The prevention, treatment and control of epidemic, endemic, occupational and other disease

(d) The creation of conditions which would assure to all medical service and medical attention in the event of sickness.”¹⁴⁸

The ICESCR is one of the most widely recognised human rights treaties and has been ratified by 171 countries including the DRC in November 1976. It implies that the treaty is legally binding for all those countries and that they have to respect, protect and promote the rights that it contains. States have the obligation to adopt legislation and measures in order to give effect to the right to health within their available resources.¹⁴⁹

Failure to comply with the rights of the ICESCR generates international responsibility of the State that has then to repair the damages caused. Moreover, there has to be a domestic mechanism of accountability that should be accessible, transparent and effective.¹⁵⁰

Thus, accountability and monitoring of the right to health is at international, regional and domestic level.

In 2000, the Committee on Economic, Social and Cultural Rights (CESCR) published the General Comment number 14 on the right to the highest attainable standard of health. Amongst others, it provides guidance and explains the States parties’ obligation contained in part 2(b) of the article 12 (“The improvement of all aspects of environmental and industrial hygiene”). It includes that States

¹⁴⁸ International Covenant on Economic, Social and Cultural Rights (ICESCR), art. 12

¹⁴⁹ ICESCR, art. 2(1)

¹⁵⁰ UN Office of the High Commissioner for Human Rights (OHCHR), *Fact Sheet No. 31, The Right to Health*, June 2008, No. 31, p.31

should take preventive measures for occupational accidents and diseases, and minimise the causes of health problems linked to the working environment. Furthermore, it has to ensure to the population safe and potable water, basic sanitation, a reduced exposure to harmful and toxic substances, protection from detrimental environmental conditions that can have an impact on human health, either directly or indirectly. Finally, the State has a responsibility in the adequate housing, the safe and hygienic working conditions and adequate supply of food and proper nutrition.¹⁵¹ Article 12.2 (c) (“The prevention, treatment and control of epidemic, endemic, occupational and other diseases”) stresses again the establishment of prevention of occupational and other diseases, and the promotion of environmental safety, education and economic development that are social determinants for good health.

In 2002, the UN Human Rights Council (that was at that time the United Nations Commission on Human Rights) set up the mandate of Special Rapporteur on the right to health.¹⁵² Its tasks are to process information about the right to health, to have a dialogue and a cooperation with the main actors that have an impact on that field (the WHO, financial institutions, NGOs, etc.), report on the way the right to health is implemented throughout the world and make recommendations.

In its report to the General Assembly in 2012 about the right to occupational health¹⁵³, former Special rapporteur Anand Grover considers it as an integral part of the right to health. It underlines the obligation of the State to formulate, implement, monitor and evaluate occupational health laws and policies. The workers at all stages should participate in that policy making. A focus is then done on environmental and industrial hygiene, the prevention and reduction of the workers’ exposure to harmful substances and the minimization of harmful hazards in workplaces. It recalls that transnational companies have an obligation to respect their workers’ right to occupational health, and States have a dual obligation in this respect. The States in which the corporation is domiciled should hold the corporation accountable for its violation of the right to occupational health even if occurring in another jurisdiction. On the other hand, the State in which the corporation has its activities must hold it accountable under relevant occupational health laws.

¹⁵¹ UN Committee on Economic, Social and Cultural Rights (CESCR), General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12 of the Covenant), 11 August 2000, E/C.12/2000/4

¹⁵² UN Office of the High Commissioner for Human Rights (OHCHR), Fact Sheet No. 31, The Right to Health, June 2008, No. 31

¹⁵³ A. Grover, Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, United Nations Human Rights, Office of the High Commissioner, A/HRC/20/15.

In 2008, the WHO and the Office of the United Nations High Commissioner for Human Rights (OHCHR) jointly released their Fact Sheet n° 31 on the Right to Health as well as a document about the Human Rights based approach to Health.

All Human Rights are interdependent, indivisible and interrelated, which implies that in the same Covenant, health is also part of other articles. As such, in Article 7 about just and favorable conditions of work, “safe and healthy working conditions” are part of it.¹⁵⁴ Furthermore, in Article 10, a provision mentions children that should be protected from exploitation and that “their employment in work harmful to their morals or health or dangerous to life or likely to hamper their normal development should be punishable by law.”¹⁵⁵

Some more references to the right to health are to be found in other international treaties, mainly in the International Convention on the Elimination of All Forms of Racial Discrimination (CERD)¹⁵⁶, the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)¹⁵⁷ and the Convention on the Rights of the Child (CRC)¹⁵⁸. Those provisions are then legally binding.

As a result, the DRC has the obligation under international law to protect, respect and fulfil the right to health.

The monitoring and accountability mechanisms of the right to health occurs at different level, namely at national level with administrative, policy and political mechanisms, judicial mechanisms and National Human Rights institutions, at regional level and at international level with the UN treaty bodies, and the UN Special Rapporteur on the right of the highest attainable standard of health.

The right to health stands in relation with other human rights from the same UN Covenant. It is dependent on the fulfillment of other Human Rights namely the right to food, to housing, to work, to education, to human dignity, to life, to non-discrimination, the prohibition against torture, etc. Some integral components of the right to health are addressed in those other rights.¹⁵⁹ Those factors are

¹⁵⁴ ICESCR, art. 7

¹⁵⁵ ICESCR, art. 10

¹⁵⁶ International Convention on the Elimination of All Forms of Racial Discrimination (CERD), art. 5 (e) (iv)

¹⁵⁷ Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), art. 11.1 (f) and 12

¹⁵⁸ Convention on the Rights of the Child (CRC), art. 24

¹⁵⁹ UN Committee on Economic, Social and Cultural Rights (CESCR), General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12 of the Covenant), 11 August 2000, E/C.12/2000/4

underlying determinants of health because they promote conditions in which persons can lead a healthy life and the right to health is thus a precondition for the enjoyment of other human rights.

In conclusion, DRC has the obligation to respect, protect and fulfil the human right to health under the ICESCR and that right encompasses a wide range of other socio-economic factors.

1.2. Recognition at the regional level: The African Human Rights System

In the African human rights system, the African Charter of Human and Peoples' Rights (ACHPR) holds in a single instrument, without distinction, economic, social and cultural rights as well as civil and political rights.¹⁶⁰ It clearly addresses the protection of the right to health in Article 16 that goes as follows:

“1. Every individual shall have the right to enjoy the best attainable state of physical and mental health.

2. States parties to the present Charter shall take the necessary measures to protect the health of their people and to ensure that they receive medical attention when they are sick.”¹⁶¹

Some notable differences with the provision about the same right in the ICESCR, is that the first part of the article here focuses on the right-holders (every individual) instead of on the duty-bearers (the States). Moreover, there is a specific reference to medical attention, that gives the article a focus more on curative care than on preventive care. There are no direct references made to underlying determinants of health unlike article 12 of the ICESCR.¹⁶²

The Charter was ratified by the DRC in 1987, which gives the country the duty to adopt legislation and necessary measures to ensure and give effect to that right. The implementation of the provisions falls in the jurisdiction of the State parties that have to fulfill their international obligations on the domestic levels.¹⁶³

¹⁶⁰ Kasongo, T., *The Implementation of the Socio-Economic Rights Provisions of the African Charter on Human and Peoples' Rights at the National Level: A Case Study of Democratic Republic of Congo (DRC)*, 2014, p. 22

¹⁶¹ African Charter on Human and People's Rights 1981, art. 16

¹⁶² Ebenezer Durojaye, 'The approaches of the African Commission to the right to health under the African Charter' (2013) 17 *Law, Democracy & Development* 393, 397

¹⁶³ Mbwisi, 'The Protection of the right to health under the Constitution of the Democratic Republic of Congo' (2014) 435

The African Commission on Human and Peoples' Rights established a Working Group on Economic, Social and Cultural Rights that developed in 2011 the Principles and Guidelines on the Implementation of economic, social and cultural rights.¹⁶⁴ It specifies the State's obligations in regard with economic, social and cultural rights, explains the minimum core obligations, the national implementation, non-discrimination, etc. It clarifies that the African Charter does not expressly refer to the principle of progressive realisation, but that this is widely accepted.¹⁶⁵ It stresses on the effective implementation of the rights of the African Charter in national legal systems and that effective domestic remedies must be provided to individuals whose rights have been violated by State or non-State actors.¹⁶⁶

The content related to the right to health specifies that the right encompasses "both health care and the underlying determinants of health" (including safe and potable water, safe food and housing, healthy occupational and environmental conditions) and that it does not equate to a right to be healthy.¹⁶⁷ However, in the minimum Core obligations, those determinants are not stated, nor directives on environmental and occupational safety.¹⁶⁸

Further, it is stressed that the States have to design development plans and programs towards the realisation of a healthy environment¹⁶⁹ and have to protect individuals and peoples against environmental, industrial and occupational hazards.¹⁷⁰ Those relate to water resources management and sanitation, preventing air, land and water pollution, and mitigating the effects of industrialisation.

The Charter contains other provisions with a direct or indirect linkage with the right to health. Those are for example the right to be free from the exploitation and degradation of man (including torture and cruel, inhuman or degrading treatment)¹⁷¹, the obligation of States to care for the families' physical and moral health and ensure the protection of the rights of women, children, aged and disabled persons.¹⁷²
¹⁷³ Others links are to be made with the right to health are the right to work¹⁷⁴, the free disposal of the

¹⁶⁴ African Commission on Human and Peoples' Rights, Principles and Guidelines on the Implementation of economic, social and cultural rights

¹⁶⁵ Ibid. parag 13

¹⁶⁶ Ibid. parag 21 and 22

¹⁶⁷ Ibid. parag 61

¹⁶⁸ Ibid. parag 67 (a-e)

¹⁶⁹ Ibid parag 67q

¹⁷⁰ Ibid. parag 67s

¹⁷¹ African Charter on Human and Peoples' Rights 1981, art. 5.

¹⁷² African Charter, art. 18.

¹⁷³ Factsheet African Charter, Health and Human Rights, WHO

¹⁷⁴ African Charter, art. 15.

peoples' wealth and natural resources¹⁷⁵, the right to economic, social and cultural development,¹⁷⁶ the right to national and international peace and security,¹⁷⁷ and the right to a general satisfactory environment.¹⁷⁸

The African Commission established in 2011 a Working Group on Extractive Industries, Environment and Human Rights Violations with the task of reviewing the impact of extractive industries on human rights and informing the African Commission about the potential liability of non-state actors in such violations.¹⁷⁹

Moreover, a resolution on a Human Rights-Based Approach to Natural Resources Governance was adopted in 2012 by the African Commission to restate the obligation of the State to comply with human rights while managing the natural resources of its country. It calls upon the State parties to ensure that extractive industries and investors are legally accountable both in the country hosting their activities and in their country of legal domicile. Parties have to set up independent monitoring and accountability systems and commit to end corruption at all levels. Local communities should participate in the decisions related to natural resources governance and the States have to avoid harmful impact on natural resources such as water.¹⁸⁰

Additionally, the right to health is also recognised in other African instruments, like in article 14 of the African Charter on the Rights and Welfare of the Child as well as in article 14 of the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa.¹⁸¹

1.3. National level: DRC Constitution

The DRC constitution contains a part dedicated to “Human Rights, Fundamental Liberties and the duties of the citizen and the State”.¹⁸² Herein, it gives all human rights, may they be political and civil, economic, social and cultural as well as collective rights, the same legal status. Moreover, the respect

¹⁷⁵ African Charter, art. 21.

¹⁷⁶ Ibid. art. 22.

¹⁷⁷ Ibid. art. 23.

¹⁷⁸ Ibid. art. 24.

¹⁷⁹ Andrés Zaragoza Montejano, 'In Search of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw 2013) 14

¹⁸⁰ African Commission on Human and Peoples' Rights, 224 Resolution on a Human Rights-Based Approach to Natural Resources Governance - ACHPR/Res.224(LI)2012

¹⁸¹ Factsheet African Charter, Health and Human Rights, WHO

¹⁸² DRC Constitution 2005, Title II

of those rights is compulsory both for the Congolese State as for every individual.¹⁸³ Protection to the right to health is guaranteed under article 47:

“The right to health and to food security is guaranteed.

The law defines the fundamental principles and the rules of organization for public health and food security.”

In addition, other articles make mention of health and its underlying determinants as autonomous rights. Article 53 states the right to a healthy environment, the duty of the persons to defend it and of the State to protect it as well as the health of the population.¹⁸⁴ Others are the right to food, housing, access to safe drinking water and to electricity.¹⁸⁵ Articles 54 and 55 describe that public health has to be protected by regulations that frame the conditions for building industries, storing, toxic, polluting and radioactive waste disposal, and that their disposal in waters or their release in air are crimes punishable by law.

The concept of State in the DRC Constitution refers to national, provincial and local spheres of the government, which means that each of these spheres had to take action to implement and protect the right to health.¹⁸⁶ Unlike the ICESCR, the DRC Constitution does not grant the implementation of the right to health progressive realisation in function of the available resources. This leads some to call it unrealistic considering the infrastructural and financial difficulties DRC faces.

The justiciability of the right to health, in theory, should imply the judgements by the courts and tribunals of DRC. However, there are up to now no cases, no court decisions or jurisprudence concerning the right to health, especially from the Supreme Court of Justice, because of a lack of cases that claim that right.¹⁸⁷

¹⁸³ Mbwisi, 'The Protection of the right to health under the Constitution of the Democratic Republic of Congo' (2014) 438

¹⁸⁴ DRC Constitution 2005, art. 53

¹⁸⁵ DRC Constitution 2005, art. 47 and 48

¹⁸⁶ Mbwisi, 'The Protection of the right to health under the Constitution of the Democratic Republic of Congo' (2014) 440

¹⁸⁷ Ibid. 444

Chapter 3: Who has a responsibility in the violations of Human Rights in the context of cobalt mining?

As we have seen in the previous parts, mining of Cobalt often comes at great cost for the lives and health of the miners and of the local population in the Katanga region. While the mining sector and the natural wealth of the region could benefit the people of Katanga, instead, they suffer Human Rights violations, are forcibly evicted to make room for expanding mines, work in dangerous conditions for low wages, etc.¹⁸⁸

In order to make more profit in the mineral value chain, savings are made by botching human rights standards, safety measures and environmental protection. Mining companies are often involved in environmental and human rights abuses but turn a blind eye on the issues. Companies that are further in the supply chain also avoid meeting those problems. The DRC government on the other hand fails to enforce its own law, to investigate potential and actual harms on environment and human rights and to provide remedies to the victims.¹⁸⁹

At the turn of the millennium, the liberalisation of the DRC mining sector resulted in a transfer of social responsibility from the States to foreign mining companies.¹⁹⁰

The respect of the right to health regarding the cobalt mining context in Southern DRC, goes hand in hand with the respect of the environment, as we have already seen before. Therefore, the responsibility of businesses and governments is going to be analysed here in the frame of their obligation towards the right to health and the environment.

1. Mining companies and transnational enterprises: the responsibility to respect the human right to health

The mining companies are not bound directly to international treaties like ratifying states do. Therefore, it is the DRC's responsibility to make sure that companies respect the Human Right to Health. DRC

¹⁸⁸ Amnesty International, 'Powering Change: Principles For Businesses And Governments In The Battery Value Chain' (Amnesty International Ltd 2021).

¹⁸⁹ Ibid.

¹⁹⁰ Perks, 'How can public-private partnerships contribute to security and human rights policy and practice in the extractive industries? A case study of The Democratic Republic of Congo (DRC)' 253

also has to control if they act in compliance with the national law, from which we are going to examine the relevant provisions.

However, there is nowadays a growing awareness among both companies and governments that industry has a responsibility to respect human rights. For example, the UN Guiding Principles on Business and Human Rights that have been adopted in 2011, although not legally binding, are already a big step forward. Interesting is that the corporate responsibility to respect Human Rights applies even if the host State is not able or willing to fulfill its own Human Rights obligations.¹⁹¹ Therefore, any company operating in the DRC has to ensure respect for human rights in their operation, even if the State lacks regulation or does not enforce applicable laws.¹⁹²

Therefore, the exercise of due diligence by mining companies in regard to the right to health and in regard to the respect of the environment, that - as we have seen before - has a strong impact on the health issues in Katanga, is going to be analysed in this chapter.

1.1. Obligations of companies under national law

Mining companies operating in the DRC have to comply with the national rules, including the Mining Code, the Mining Regulation and the Annex IX on the elaboration of the Environmental Impact Study and the Environmental Management Plan.

Before Starting a mining activity, corporations have to perform an Environmental Impact Study (EIS) to assess their potential impact on the environment. Doing so, they have to describe the ecosystem before the start of the exploitation and the aspects that may be impacted. Moreover, they have to describe a plan with effective measures for protecting the environment, eliminating or reducing potential pollution and rehabilitating the affected sites in case of pollution.¹⁹³

Local communities must participate and be included in the design of the EIS. Moreover, they have to be informed about potential or actual negative impacts, about the rehabilitation measures prepared for them and receive compensation for the harms arising from the mining project.¹⁹⁴

¹⁹¹ United Nations, Guiding principles on business and human rights: Implementing the United Nations "Protect, Respect and Remedy" framework. (2011), Commentary to Principle 11

¹⁹² Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016) 40

¹⁹³ Code Minier de la République Démocratique du Congo 2018, art. 204

¹⁹⁴ République Démocratique du Congo, 'Décret N° 038/2003 Du 16 Mars 2003 Portant Règlement Minier' (2003), art. 451

In addition to the EIS, mining companies have to submit an Environmental Management Plan Project (EMPP) providing details of a program for the implementation of measures described in the EIS to eliminate and reduce the adverse environmental impacts of the project.¹⁹⁵

Human rights due diligence: an overview from the UN Guiding Principles perspective

In the Katanga region, there is a general lack of enforcement of the law. However, not respecting the law that relates to them, companies expose themselves to big risks.

Four cases illustrate this argument:

The case of the Kafubu river in front of the court of Kipushi in 2011 opposed the Congolese State, Gécamines and the Compagnie minière du sud Katanga (CMSK) with representatives of the local communities affected by polluting industrial activities in the Kafubu River. The mining enterprises were accused of having dumped toxic substances into the river, and compensation was sought for the harms suffered. The defendants were sentenced to pay USD 6,000 in compensation to the victims of the pollution. This was deemed by the victims' lawyers to be neither sufficient nor proportional to the damage suffered, however this case could be a step forward in creating favourable jurisprudence for similar cases in the region.¹⁹⁶

In the case 'Public ministry, Mamadou Mbolela and others vs. Mawazo and others', the Compagnie Minière du Sud Katanga (CMSK) and the DRC, brought in 2015 in front of the tribunal of Kipushi, the demolishing of properties of the populations of Kawama in 2009 was discussed. The Congolese national Police (Mr. Mawazo and others) with the support of CMSK had expelled the local population by destroying approximately 400 houses, farms and other equipment. The case was first brought at the high court of Lubumbashi but remained unexamined because of political pressure.¹⁹⁷ During the 4th hearing, the case was declared inadmissible because the limitation period had expired. The advocates of the victims brought the case in appeal and Afreewatch underlined the importance of independence of the

¹⁹⁵ Code Minier de la République Démocratique du Congo 2018, art. 1

¹⁹⁶ 'Pollution De La Rivière Kafubu: L'Etat Congolais, La Gécamines Et La CMSK Obligés De Payer 6 000 USD [Rép. Dém. Du Congo] - Business & Human Rights Resource Centre' (*Business & Human Rights Resource Centre*, 2014) <<https://www.business-humanrights.org/fr/dernières-actualités/pollution-de-la-rivière-kafubu-letat-congolais-la-gécamines-et-la-cmsk-obligés-de-payer-6-000-usd-rép-dém-du-congo/>> accessed 9 July 2021.

¹⁹⁷ Afreewatch, 'AFREWATCH Requests The Kipushi Tribunal To Administer Justice With Independence In The Legal Case Of Public Ministry, Mamadou Mbolela And Others Vs. Mawazo And Others, The Compagnie Minière Du Sud Katanga (CMSK) And The DRC' (2015).

judiciary. The conclusion of the case has not been found, but this case shows the weakness of the DRC judicial system.

IRAdvocates has brought a case against Apple, Alphabet (Google), Dell, Microsoft, and Tesla on behalf of 14 plaintiffs that are the families of children victims of accidents in cobalt mines in DRC. Those children have either been killed in tunnel collapses, or are severely and permanently injured provoking disabilities. There is evidence that these companies have the mines in which those accidents occurred in their supply chain and aided those mines. The companies claim they cannot control what the mining companies do. But this amongst non-compliance to their due diligence obligation. To date, the case is still ongoing.¹⁹⁸

A fourth case, happening in Nigeria in 2013, opposed Mr. Akpan and Shell for environmental damage on the territory of the Ogoni people, which resulted in the destruction of the local environment. The case was brought in front of the Dutch Court and for the first time, that court has found a Dutch company responsible for environmental damage caused outside its territory. The company was sentenced to pay the damages for the Nigerian plaintiff.¹⁹⁹

In order to not take that kind of risk that could affect their viability, companies should conduct human rights due diligence. In accordance with international standards, all companies purchasing cobalt, or components containing cobalt, should carry out due diligence in their supply chain.

Due Diligence requires enterprises to identify, prevent, mitigate and account for how they deal with their negative human rights impacts. The United Nations Guiding Principles on Business and Human Rights (UNGP) describes what enterprises have to do to identify and assess actual and potential adverse human rights impacts, occurring through their own activities or through their business partnerships. Human rights due diligence for business enterprises and how to implement measures to

¹⁹⁸ 'Cobalt DRC Case' (*International Rights Advocates*, 2021) <<http://www.iradvocates.org/case//cobalt-drc-case>> accessed 11 July 2021.

¹⁹⁹ Chancia Ivala Plaine, 'Succès Dans L’Affaire Du Peuple Ogoni - Nigéria : Mise En Cause Du Devoir De Diligence D’Une Multinationale Néerlandaise - Droit De L’environnement Pour L’afrique' (*Droit de l’environnement pour l’Afrique*, 2021) <https://www.droit-de-l’environnement-pour-l’afrique.com/2021/01/31/succes-dans-l’affaire-du-peuple-ogoni-nigeria-mise-en-cause-du-devoir-de-diligence-dune-multinationale-neerlandaise/?fbclid=IwAR0JILsiwg0Rh799_WhkPZpvpieY95__rN6VZET4Ysd7WoPN0Nxmjmj6NIAM> accessed 10 July 2021.

prevent, address and repair human rights violations are clearly set out in the document.²⁰⁰ Companies have to take every reasonable step to avoid any involvement with human rights abuses.

The UNGP describes what the governments and the businesses have to do in order to prevent and address negative human rights effects by business. The three main pillars of the Guiding Principles are the State's duty to protect individuals against abuses of a third party (here, business enterprises), the businesses' duty to respect the Human Rights, that thus have to act with due diligence to avoid violating one of them and to solve negative impacts they are involved with and finally, and the victims access to effective remedies, judicial or not.²⁰¹

Due diligence is not just an assessment of risks for a company, but rather an understanding of the impact that a company's activities can have on right holders, including in its supply chain and a call to address those potential or actual abuses.²⁰²

In the context of ensuring the Human Right to health, due diligence means that companies have to take measures to avoid adverse health effects. In order to do so, they must take every reasonable step. Some of them are described in the Congolese legislation that has some clear provision for mining companies to carry out due diligence even if they are not framed in Human Rights terms. The implementation of the EIS and EMPP for example clearly requires to assess actual and potential impacts, to track responses and communicate how harms are addressed.

In the Mining Regulation, it is stated that mining companies are responsible for the environmental damage their activity provokes if they do not observe their EMPP. Negligence or imprudence through action or inaction can also generate legal liability.²⁰³

The 2002 Mining Code contains some obvious weaknesses in that regard. For example, the fact that traders are not obliged to ask any questions about the origin of the cobalt or the condition of

²⁰⁰ ten Kate A, and Kiezebrink V, 'Responsible Mining: Cobalt' (the GoodElectronics Network 2016) 3

²⁰¹ Mariëtte van Huijstee, Victor Ricco and Laura Ceresna-Chaturvedi, 'How To Use The UN Guiding Principles On Business And Human Rights In Company Research And Advocacy A Guide For Civil Society Organisations' (SOMO, CEDHA, Cividep India 2012).

²⁰² Andrés Zaragoza Montejano, 'In Search of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw 2013) 20

²⁰³ République Démocratique du Congo, 'Décret N° 038/2003 Du 16 Mars 2003 Portant Règlement Minier' (2003)

extractions, while this would be essential in order to identify, prevent and mitigate human right risks linked to extraction and trade of cobalt.

The principal health and safety, and labour laws that are applicable to the mining sector in the DRC are contained in the 2002 Mining Code and the 2003 Mining Regulations. But most of the health and safety regulations are to be found in the Congolese Labour Code, even though they do not target specifically the mining sector. The Labour Administration and the Labour Inspectorate are then, the main regulatory and control bodies.²⁰⁴

The 2002 Labour Code details the workers' rights in DRC, including regulation on working hours, salaries, health and safety, etc.²⁰⁵ It prohibits the worst forms of child labour, including work that is likely to be harmful to the health and safety of children.²⁰⁶ In the Section on Employer's obligations, Article 55 recalls that the employer must ensure that the work is carried out in suitable conditions, as regards the safety, health and dignity of the worker.²⁰⁷ In Titre VII, the whole chapter is allocated to health and security at work. In there, article 175 explicitly states that when the working conditions are found dangerous for the security and health of workers, the employer is given formal notice by the Labour Inspector to remedy the situation.²⁰⁸

Annex IX of the Mining Code describes and gives the directives on how to follow the EMPP procedures. It indicates that the mining operator has to analyse the negative impacts of its mining project on the area of the planned mining zone and in the surrounding area. The analyses on the risk for the health and well-being of the local population and the workers is part of it, as well as the risk of air, water and soil pollution and the risk of accidents²⁰⁹ Some very precise measures are further described, for instance that companies must put in place a system to separate and isolate waste and contaminated water to reduce the risk of polluting safe water sources.²¹⁰ In the 6th chapter of the annex, the security measures are described. Article 93 states that the mine operator must provide for health preservation

²⁰⁴ Olivier Bustin and Matthieu Le Roux, 'Democratic Republic Of Congo', *Mining 2020* (Tom Barnes 2020) 62

²⁰⁵ Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016) 35

²⁰⁶ République Démocratique du Congo, Code du Travail' (2002), art. 3d

²⁰⁷ Ibid. art. 55

²⁰⁸ Ibid. art.175

²⁰⁹ République Démocratique du Congo, 'Décret N° 038/2003 Du 16 Mars 2003 Portant Règlement Minier' (2003), annexe IX, art. 42

²¹⁰ Ibid. annexe IX, art. 56

measures for the local populations and the personnel in the context of the prevention of mining-related accidents and diseases.²¹¹

In the Mining Regulation, the Minister of Mines can temporarily suspend mining operations if a failure directly endangering the life or health of one or more persons occurs, until the company puts in place adequate measures to safeguard life and health.²¹²

In conclusion, many more articles make references to health measures and environmental preservation in link with mining activities. The Congolese law clearly requires enterprises to take every reasonable step to avoid being involved in human rights abuses linked with the health of the workers, of the local population and thus to perform due diligence.

Additional measures that mining companies should take to respect the human right to health

In order to perform effective human rights due diligence, enterprises have to take additional steps to internalize the findings from their impact assessments inside the functioning of their company. That process is also described in the UNGP. To do so, they have to give the responsibility of addressing the adverse impacts found, to employees that have the relevant capacities to work on it. Furthermore, an adequate budget has to be allocated to the cause. The decision-making and supervision process have to be adapted and the enterprises have to verify if their measures taken in regard with their negative impact on health are effective by using qualitative and quantitative indicators. They have to keep communication with affected communities and the civil society to consult them on the progress made. Also, they should communicate their findings in an open and transparent way, so that all interested actors can be informed about their progress in the process of due diligence. At last, if a company identifies it has had a harmful impact on the right to health of the population and the workers, it should engage in a remediation process that can be judicial or administrative.²¹³

Currently, there is no legal system in the world that requires businesses to respect due diligence regarding the Cobalt supply chain. In DRC, there is some legislation for disclosure of information about other minerals. In 2012, the State incorporated the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, that we are going

²¹¹ Ibid. annexe IX, art. 93

²¹² Ibid. art. 570

²¹³ United Nations, *Guiding principles on business and human rights: Implementing the United Nations "Protect, Respect and Remedy" framework*. (2011), Principles 18, 19, 20, 21

to discuss later, into national law. This concerns the tin, tungsten and tantalum (3TGs) and gold supply chain, but the law states that new minerals could be added to the list following a decision by the regional body, the International Conference on the Great Lakes Region (ICGLR). Until it is added to that list, the cobalt traders have to comply with the 2002 Mining Code.

1.2. Obligations of companies under international law

Businesses can affect the right to health in direct or indirect ways, by the impact they have on their workers and on the environment and the local community. States must protect its population against pollution or contamination made by private companies. They are ultimately accountable for the violations of human rights. But businesses are also considered to have some responsibilities when it comes to human rights.²¹⁴

The international framework for responsible business conduct and the mineral supply chains, consists of different instruments. The UNGP is one of them. In this section, we are going to review other instruments with which companies must comply.

The UNGP's impact on mining enterprises has already been analysed here above. In addition, it should be added that the document makes clear that all companies in the supply chain should take action and corrective measures for victims that have suffered a human rights violation made by a company at any point during their operation. This implies that companies cannot simply break contracts or trade relationships or put an embargo on resources coming from the DRC if it is discovered that Human Rights violations occur in their supply chain. Instead, they have to take the necessary steps in collaboration with the relevant actors (national authorities for example) to make sure that the harm suffered by workers or the local population is remediated.²¹⁵

The Organization for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises, adopted in 1976 and revised for the 4th time in 2011 set out standards and benchmarks for responsible business conduct. They promote compliance with human rights, transparency, the setting of

²¹⁴ UN Office of the High Commissioner for Human Rights (OHCHR), *Fact Sheet No. 31, The Right to Health*, June 2008, No. 31, 30

²¹⁵ Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016) 43

environmental policies and the fight against corruption.²¹⁶ Although not legally binding, signatory States commit to encourage compliance with them on their territory.²¹⁷ Provisions regarding health and security in the working environment are numerous and a whole section is dedicated to the environment and the protection of the health in this regard.²¹⁸

Another instrument of the OECD focusing on due diligence in supply chains is the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. If there is a risk to contribute to conflict, a risk-based due diligence is necessary to address the potential or the actual risks and to mitigate the negative impacts of mining. Those guidelines were developed for multinational enterprises to help them to conduct conflict due diligence and to avoid contributing to conflict through their mineral purchase practice.²¹⁹

The southern region of DRC constitutes a “high-risk area” according to the OECD’s definition because of numerous factors namely political instability, institutional weakness, insecurity, lack of protection for human rights, and peaks of violence.²²⁰ The document outlines a five-step process that every enterprise involved in the supply of minerals has to follow. The OECD Guidance has been agreed by governments, DRC endorsed it as well, and is widely recognised as the international standard for mineral supply chains. It is not legally binding, but it gives detailed instructions for the extraction of minerals from sensitive areas.

However, states can take steps to legally require compliance with the OECD Guidelines. The document identifies that companies at different stages of the supply area have different responsibilities. Therefore, it identifies upstream and downstream companies. Upstream are the smelters, refiners and traders in Katanga. Downstream would be the companies that buy the cobalt, the ones that manufacture, sell components for batteries, the brands that sell finished products to consumers.

²¹⁶ Yorbaná Seign-Goura, 'État Des Lieux De La Responsabilité Sociale Des Entreprises De L'industrie Extractive En Afrique Centrale Et Au Tchad: Politiques Et Initiatives' (La Conférence des Nations Unies sur le Commerce et le Développement 2017) 4

²¹⁷ Fabrizio Marrella, *Protection internationale des droits de l'homme et activités des sociétés transnationales* (Martinus Nijhoff 2017) 62

²¹⁸ Organisation for Economic Cooperation and Development (OECD), *OECD Guidelines for Multinational Enterprises*, 25 May 2011, 50-52

²¹⁹ ten Kate A, and Kiezebrink V, 'Responsible Mining: Cobalt' (the GoodElectronics Network 2016) 3

²²⁰ Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016) 41

Upstream companies carry the responsibilities to trace the source of the minerals until the extraction point to verify its exact conditions of extraction, trade and export. They then have to provide that information to the downstream companies. In addition, they should take steps to prevent and meet human rights abuses in their supply chain.²²¹

Downstream responsibility included for a company to be able to trace the cobalt present in its products until the company which refined it. In those Guidance, they are not expected to trace the mineral until the mines in Katanga. However, they have to review the due diligence process of the upstream companies of their supply chain and assess if they are in concordance with the OECD Guidance.²²² If they identify some risks, they should take steps to mitigate them and use their leverage on their suppliers.

In the wake of the Guidance, some important steps were made worldwide:

China recognised the OECD Guidance as the international standard for supply chain due diligence. Moreover, the Chinese Chamber of Commerce of Metals Minerals & Chemicals Importers & Exporters (CCCMC) signed a Memorandum of Understanding with the OECD to promote the Guidance and has released its own due diligence code which contains measures about cobalt trading.²²³

In the United States of America, the provision on conflict minerals in the Dodd-Frank Act was adopted in 2013 in an attempt to stop financing conflict from mineral profit from DRC and adjoining countries. This was the result of international pressure to use domestic and regional law to make importers and importing countries accountable for financing it. Companies that are implicated in the supply chain of the 3T and gold and trade with the US now have to act with due diligence.²²⁴ If there is a risk to contribute to conflict, a risk-based due diligence is necessary to address the potential or the actual risks and to mitigate the impacts of mining. As a result, US companies had to investigate their supply chains and it marked an important step for the due diligence of downstream companies. The act does not mention cobalt, yet the scope of the law can be extended to other minerals if they are determined by the Secretary of State to finance conflict in DRC.²²⁵

²²¹ Organisation for Economic Cooperation and Development (OECD), OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, 6 April 2016, 27-32

²²² OECD Guidance, 33

²²³ Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016) 44

²²⁴ International Peace Information Service, 'The Formalisation Of Artisanal Mining In The Democratic Republic Of The Congo And Rwanda' (Center for International Forestry Research 2012) 6

²²⁵ Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016) 44

Other voluntary initiatives of the industrial sector started to arise - with a more limited impact because of their voluntary nature - for instance the Responsible Cobalt Initiative (RCI), the Responsible Raw Materials Initiative and the Global Battery Alliance.²²⁶

In addition, the OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector, released in 2017, provides a practical framework for risk identification and management regarding adverse impact of extractive industries. A special focus on indigenous population and artisanal workers, and an extensive call to engage and consult affected parties in the decision process of extractive projects are to be found there. It recommends as well a health impact assessment and the understanding of socio-economic factors of the region. when planning a project.²²⁷

The Global Compact that is another non-binding instrument encourages enterprises to respect and promote Human Rights, with under more the abolishment of child labour and of forced labour. It is the first instrument that makes businesses partners of the UN and the international community.²²⁸ Committed enterprises have to comply with 10 principles and issue reports to communicate their respect of human rights.²²⁹ The Compact induces accountability of the enterprise but also of its director. Nowadays, most of the big enterprises have joined it. Some critics claim that the fact that there is no control of implementation and that it results in a marketing criteria more than a real compliance. However, enterprises that do not report can be removed from the list.²³⁰ The three principles about environment and the two principles ensuring compliance to Human Rights makes signatory enterprises involved in mining in Katanga or further in the cobalt supply chain, like Glencore, Panasonic, LG Chem, accountable for adverse health effects in the local population.

The International Labour Organisation (ILO) approved the Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy in 1977. It is another not-legally binding instrument and recommends to transnational enterprises, governments to comply on a voluntary basis

²²⁶ Amnesty International, 'Democratic Republic Of The Congo: Time To Recharge: Corporate Action And Inaction To Tackle Abuses In The Cobalt Supply Chain' (Amnesty International Ltd 2017) 6

²²⁷ Organisation for Economic Cooperation and Development (OECD), *OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector*, 2 February 2017, 39-42

²²⁸ Fabrizio Marrella, *Protection internationale des droits de l'homme et activités des sociétés transnationales* (Martinus Nijhoff 2017) 68

²²⁹ Yorwana Seign-Goura, 'État Des Lieux De La Responsabilité Sociale Des Entreprises De L'industrie Extractive En Afrique Centrale Et Au Tchad: Politiques Et Initiatives' (La Conférence des Nations Unies sur le Commerce et le Développement 2017) 4

²³⁰ Fabrizio Marrella (2017) 70-72

to the principles. It was the first instrument to introduce the concept of “corporate social responsibility”. The part about safety and health gives some indication on health in the working environment. Moreover, it is highlighted to encourage multinational enterprises to contribute positively to economic and social progress "and to minimise and resolve the difficulties that their operations may raise".²³¹

Another important instrument of the ILO, is the Safety and Health in Mines Convention of 1995. This document regulates the different safety and health issues that are typical of mining, including inspection, the minimization of health issues and special protective equipment for workers.²³² The DRC, which has been a member of the ILO since 1960, has not ratified this convention. Therefore, the country is not legally bound to it. To date, only 34 countries have ratified it. However, this implies that those countries have to make businesses under their jurisdiction respect the provisions stated in the convention when mining in Katanga.

Under the African Union framework, there are discussions going on about drafting the African Union Policy on Business and Human Rights. There is a huge need to find a balance between the needs of companies and the rights of people to a decent life and a healthy environment. The businesses need to be made more responsive for their impact on human rights and effective remediation to human rights abuses have to be implemented.²³³ The draft, which offers a whole framework, has to be approved by the Heads of States and the governments in the Africa Union.²³⁴ The approval would constitute a huge step forward in the continent.

Concerning new developments in the field, some negotiations are currently ongoing on the “Zero Draft Treaty on Business and Human Rights”, between the UN Office of the High Commissioner for Human Rights, state representatives, civil society groups and industry stakeholders. The idea is to further develop the UNGPs and to create a legally binding instrument of business and human rights obligations that states as well as transnational enterprises should respect. An intergovernmental working group

²³¹ Yorbana Seign-Goura (2017) 5

²³² International Labour Organization (ILO), *Safety and Health in Mines Convention*, 1995

²³³ 'African Union Set On Making Businesses More Responsive To Human Rights Through Development Of A Policy On Business & Human Rights - Business & Human Rights Resource Centre' (*Business & Human Rights Resource Centre*, 2017) <<https://www.business-humanrights.org/en/latest-news/african-union-set-on-making-businesses-more-responsive-to-human-rights-through-development-of-a-policy-on-business-human-rights/>> accessed 17 July 2021

²³⁴ Ololade Bamidele, 'AU Set On Making African Businesses More Responsive To Human Rights' (*Premium Times Nigeria*, 2017) <<https://www.premiumtimesng.com/business/business-news/227098-au-set-making-african-businesses-responsive-human-rights.html>> accessed 17 July 2021.

(IGWG) has been created for the elaboration of this instrument. Until now it has progressed from the Zero Draft (2018), to the Revised Draft (2019) and the Second Revised Draft (2020) and is still evolving.²³⁵ Its adoption as a treaty would be an enormous step in the due diligence practice of transnational enterprises.

At a national level, such a legally binding responsibility for multinational enterprises has already been adopted in France. In March 2017, the French parliament adopted a law called “Loi Travail” (Loi n. 2017-399) regarding Due Diligence for French Companies. It is the first law in the world that expands the due diligence duty to all the entities over which a company has a relevant influence. A “vigilance plan” has to be established to identify and prevent the risks regarding human rights, environment, health and safety, that could occur in all the supply chain of any French company.²³⁶

1.3. Other initiatives

Another initiative, taken by Amnesty International, are the 2021 Principles for Businesses in the Battery value chain. Signed by numerous NGO, the document lays out principles for governments and businesses that they should follow in regard to Human Rights and the environmental change that leads to an increase in the use of rechargeable batteries. Businesses have to “avoid causing, contributing to or being directly linked to Human Rights abuses” coming from the battery value chain (from extraction of minerals to consumer’s use) by adopting the principles. Meanwhile, governments are required to fulfill their Human Rights obligation, and to protect citizens from potential human rights abuses by companies operating or domiciled in their territory or jurisdiction.²³⁷ It asks businesses to respect human rights and the environment as well as to recognize the wide range of human rights that could be impacted such as the right to health.²³⁸ Further, it demands government to legally require businesses to respect human rights and the environment and to enforce its own regulations.²³⁹

²³⁵ 'Binding Treaty - Business & Human Rights Resource Centre' (*Business & Human Rights Resource Centre*, 2021) <<https://www.business-humanrights.org/en/big-issues/binding-treaty/>> accessed 17 July 2021.

²³⁶ Vania Brino, 'Labour Law And Transnational Firm' (16th February 2021)

²³⁷ Amnesty International, 'Powering Change: Principles For Businesses And Governments In The Battery Value Chain' (Amnesty International Ltd 2021)

²³⁸ Ibid. Principles, 11 and 1.2

²³⁹ Ibid. 2.1 and 2.5

In addition, some companies have developed their own human rights tools, some dealing with the right to health, and integrate them into their operation.²⁴⁰

2. The responsibility of the DRC State: health impacts and governance

We are going to analyse the international human rights obligation of the Congolese State regarding the right to health and its action in order to respect, protect and fulfil this right.

As we have described in previous chapters, there is evidence that mining companies' activities cause health issues to the local population and thus have negative impacts on the right to health of local communities. In this section, we are going to analyse the responsibility of the DRC State in the mining context.

As a State party of the ICESCR, the Congolese government has the obligation to respect, protect (the actions of private companies) and fulfil the right to health of its population. These obligations also arise from the ACHPR, as specified by the ACoHPR Working Group on Extractive industries, analysed previously.

Therefore, DRC has to take effective measures to combat adverse health impacts on local communities by third parties as part of its duty to protect. This has to be done through effective policies, legislation and regulation. Further, it has to take appropriate steps to prevent those health effects, to investigate and sanction the responsible actors, to stop the pollution in the Katanga region and to repair the harm done. If the Congolese State does not do so, it violates its international legal obligations regarding the right to health.

It will be shown here how the Congolese State fails to comply with its international legal obligations regarding the right to health of its population.

2.1. National legislation and governance in the health and mining sectors

The health sector

The health sector in DRC is regulated by the Ministry of Health. Laws, decrees and ordinances have been issued, but very few or none of them make reference to working conditions or to a healthy living environment. The law 18/035 of 2018 establishing the fundamental principles relating to the

²⁴⁰ UN Office of the High Commissioner for Human Rights (OHCHR), *Fact Sheet No. 31, The Right to Health*, June 2008, No. 31, 30

organisation of public health, contains a part on sanitary protection of the living environment and public hygiene. However, it only deals with waste and noise nuisance.²⁴¹

The DRC Constitution contains some articles related to collective rights that give some indications about the right of the population to a healthy environment. Article 53 requires the State to ensure the protection of the environment and of the health of its population. The DRC citizen had on his side the right to a healthy environment.²⁴² The next provision ensures that “any pollution or destruction resulting from an economic activity gives rise to compensation and/or reparation.”²⁴³ And further, that the dumping or spreading of toxic, pollutant or radioactive waste in water, air or soil constitutes a crime punishable by law.²⁴⁴

However, regarding environmental pollution, the UN Environment Programme affirms the DRC framework does not provide a coherent legal framework.²⁴⁵

The mining sector

As analysed previously, the mining sector In the DRC and its relation with the right to health is mostly regulated through the Mining Code, the Mining regulation and the Appendix on the implementation of the EIS and the EMPP. Those regulations might be improved but the main problem is rather the lack of implementation and enforcement rather than a lack of regulation. This implies that not only enterprises are responsible for the harm provoked on local communities and not respecting the law. The Congolese government is also responsible for not enforcing the laws that require mining companies to respect human rights.

In the Mining Regulation, it is stated that the local population has to be consulted and informed about the risks of the projects and that the enterprises have to conduct an environmental impact research every two years to be sure they operate in line with the environmental obligations. However, the civil society points out that the mining companies often do not respect those provisions despite their legal

²⁴¹ République Démocratique du Congo, ‘Loi n° 18/035 du 13 décembre 2018 fixant les principes fondamentaux relatifs à l’organisation de la Santé publique’ (2018), Titre V

²⁴² Constitution de la république Démocratique du Congo 2005, art. 53

²⁴³ Ibid, art. 54

²⁴⁴ Ibid, art.55

²⁴⁵ Andrés Zaragoza Montejano, 'In Search of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw 2013)

obligation to do so. They also do not fulfil their obligation to compensate the communities when harm is done.

But the government can be blamed for approving projects even if they lack public consultation. And to not check if the activities comply with the conditions described in the environmental impact study, reducing de facto the importance of the document. This implies that companies do not conduct the necessary field analyses and do not apply what they have written in it, since it has become just a formal document. This lack of taking action by both national and provincial authorities feeds the impunity dynamics and makes the State fail to comply with its duty to protect.

A debated topic is whether the mining legislation in DRC should require besides the EIS and the EMPP, also human rights impact assessment (HRIA). The EIS and EMPP indeed do not include reference to the right to health or the impact of mining on the health of the local population. The UN Special Rapporteur on the right to water and sanitation also has stressed that DRC should adopt legislation that obliges mining enterprises to perform a human rights impact assessment.²⁴⁶ The ACoHPR resolution on a human rights approach to governance of natural resources that calls States to make sure social and human rights impact assessments are made, is pushing towards the same direction.

2.2. Institutional framework

A State needs an administrative structure to monitor the implementation of its law. Concerning the right to health and the protection of the health of populations in the area of mining exploitation, there is also a need for a control mechanism to make sure the companies comply with the Congolese law. The administration can also provide remedies for individuals whose rights have been violated. To punish and compensate for harms done to the local population in the mining area, non-judicial mechanisms can be used as complement to courts. That competence is in the hands of the Department on the protection of the Mining Environment, within the Ministry of Mines.²⁴⁷ However, because of the centralised power, the complaints made by local authorities are often not taken into account by the national authorities. Furthermore, a lack of resources, technical equipment and competence of officials that are in charge of the control of pollution explains the lack of reaction to the harms provoked by

²⁴⁶ Andrés Zaragoza Montejano, 'In Search of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw 2013) 24

²⁴⁷ Code Minier de la République Démocratique du Congo 2018, art. 15

mining companies.²⁴⁸ In addition, the public sector is rife with corruption at all levels which brings extra difficulty to make companies comply with the DRC legislation.

All of those factors result in a widespread impunity for mining companies violating the human right to health in the Katangese region.

2.3. Judicial framework

In order to protect the rights of the population, to find justice and reparation, the Courts are a key instrument. Victims of right to health violations could have access to effective remedies if they could bring their complaints in front of a tribunal.

However, in the DRC, the performance of the justice system is affected by political and military influence and access to it depends on financial means.²⁴⁹ Corruption is also present in this sector and allegations against influential actors are poorly investigated. Moreover, this sector also lacks resources and of capacity for technical cases or extensive investigations/

However, the case of the Kafubu river, which has been mentioned previously, might contribute to creating favourable jurisprudence. It highlights the role of the government in the protection of the rights of the population, the lack of preventive and due diligence measures taken by companies and the lack of reparation to the victims, three elements related to the UNGP pillars.

2.4. International obligation

The DRC is a State party to numerous international and regional treaties. Amongst others, it has ratified the International Covenant on Economic, Social and Cultural Rights, Convention on the Rights of the Child, Convention on the Elimination of All Forms of Discrimination Against Women, ILO Worst Forms of Child Labour Convention, ILO Minimum Age Convention and the African Charter on Human and People Rights. According to those documents, the government is required to protect the rights of all workers, the right to health, the right for an adequate standard of living. Children and workers in the artisanal mines of Katanga put their health and safety in danger. The local communities

²⁴⁸ 'Les Investissements Miniers En République Démocratique Du Congo : Développement Ou Appauvrissement Des Communautés Locales?' (The Carter Center 2012) 25

²⁴⁹ Association Congolaise pour l'Accès à la Justice, *"La Justice est privatisée en RDC"* (2012)

suffer health problems due to the pollution generated by mining enterprises. Those persons have the right to be protected by their State from those human rights abuses.²⁵⁰

Under the African Charter, States have to ensure that all the rights it recognises have to be made effective under the national legal system.²⁵¹ The DRC is a State party to the Charter and thus must provide effective remedies to affected individuals under its domestic law for any violation of economic, social and cultural rights by State or non-state actors, thus also for the violation of the right to health. Those remedies can be judicial or administrative, but must be accessible, affordable and timely.²⁵² In addition, every individual should have effective access to quality legal services, especially for members of vulnerable communities.²⁵³ Ultimately, the international remedies are only a supplement to effective national remedies.

As foreseen in the African Charter, an African Commission on Human and Peoples' Rights was established in 1987. Anyone can submit an individual communication to the Commission. If it is admissible, the Commission considers it. It then sends its conclusions, the existence of human rights violations or not, and its recommendations for remedies to the Assembly of Heads of State and Government. If the Assembly adopts them, they are published. This body is quasi-judicial, which means that the conclusions are not binding.

In 2004, the African Court on Human and Peoples' Rights was established. Individual cases can only be brought to the Court by the Commission or by a state, which means that the Court will only decide on individual communications after they have been brought before the Commission.²⁵⁴

In addition, as stated by the Working Group of the African Commission on Extractive Industries, Environment and Human Rights violations, there is not yet an African framework for monitoring, reporting and redressing human rights abuses in the extractive industries. There is also a need to clarify

²⁵⁰ Cataleta, M., Human rights violations against children in the Democratic Republic of Congo, the international trade in minerals. (*Misión Jurídica*, 2020).

²⁵¹ African Commission on Human and Peoples' Rights, *Principles and Guidelines on the Implementation of Economic, Social and Cultural Rights in the African Charter on Human and People's Rights*, 2010, 14 parag. 21

²⁵² *Ibid.* 14, parag. 22

²⁵³ *Ibid.* 14, parag. 23

²⁵⁴ Fabrizio Marrella (2017) 406-408

the role of transnational companies in human rights abuses and their - or non-state actors - potential liability for violations of the African Charter.²⁵⁵

In its report of 2016, Amnesty International found that DRC was not respecting its obligation to protect against violations of the right to work, workers' rights and the right to health because it was failing to put in place and implement sufficient safeguards for artisanal miners facing serious health and operational hazards.²⁵⁶ In a subsequent report, the organisation requested the DRC to adopt regulations that ensure transparency about the extraction sites and the mining conditions, as well as the trade and the actors involved in the Cobalt supply chain.²⁵⁷

2.5. The State as an economic actor

The Congolese State has a prominent role in the mining sector, especially in the Copperbelt. It is participating there in the mining industry through its state-owned company Gécamines. It is also a mandatory shareholder in all the other mining companies of the region. Therefore, the State has some Human Rights obligation also arising from that position.

The State's responsibilities and effective control

Since the Congolese government has such a degree of control over Gécamines and even if legally it is a separated entity, the human rights abuses originating from its activities or participation in mining exploitation may be considered a violation of DRC's international law obligations.²⁵⁸

Moreover, Gécamines is engaged in all the joint-ventures of Katanga. When doing so with a foreign investor, Gécamines can choose up to 20-40% of the board membership in the new company. The State could thus with such a managerial power provide that human rights due diligence are effectively implemented. And that the right to health is respected by the mining activities in which Gécamines participates.

²⁵⁵ African Commission on Human and Peoples' Rights, Working Group on Extractive Industries, Environment and Human Rights Violations

²⁵⁶ Amnesty International, 'Democratic Republic Of The Congo: Time To Recharge: Corporate Action And Inaction To Tackle Abuses In The Cobalt Supply Chain' (Amnesty International Ltd 2017) 7

²⁵⁷ Ibid. 14

²⁵⁸ Principle 4 UNGP

For those reasons, the Congolese State's obligations regarding Human Rights and in particular the right to health, are reinforced by that important control it has over the state-owned company Gécamines. It is a major actor in the province and the State could use it to fulfill its due diligence obligations.

The State as a shareholder in mining companies

In the Katanga region, the State is a shareholder in every industrial mining company. Previously, 5% of the capital of the company had to be transferred to the Congolese government, and since the revised Mining Code of 2018, it raised to 10%, in the form of shares. This has even reinforced the responsibility and the capability of the government to protect the right to health of local communities through its participation in mining projects.

Indeed, as a shareholder to all those mining companies, the DRC State is in position to influence the mining exploitation in Katanga and prevent human rights abuses from private mining companies by pushing the company, as a shareholder, to respect its duties and to comply with the Mining Code.

3. The role of foreign states : extraterritorial human rights obligations

The mining companies in the Katanga Copperbelt are for the most foreign companies. Many of those companies have been involved in Human Rights abuses, as we have already seen before, through their subsidiaries implemented in DRC. Even if the DRC has the responsibility to protect the human rights of its citizens, it has to be recognised that it is often not willing or not able to do so. Therefore, the responsibility of the home States of the foreign companies can also be examined.

The UN Committee on Economic, Social and Cultural Rights has clarified a separate duty on States to protect human rights in the context of business activity which has an extraterritorial dimension. Indeed, States have a duty to prevent third parties, such as companies from violating human rights abroad, if they are able to influence these third parties by legal or political means. This applies to the companies domiciled in the State's territory.²⁵⁹

Moreover, the second principle of the UN Guiding Principles on Business and Human Rights affirms that "States should set out clearly the expectation that all business enterprises domiciled in their

²⁵⁹ Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016) 45

territory and/or jurisdiction respect human rights throughout their operations.”²⁶⁰ Therefore, international law does not force the States to regulate the extraterritorial activities of companies domiciled in their territory, but they are allowed to do so.

The Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights, adopted in 2011, provide an interpretation of international law that makes States responsible to avoid causing harm extraterritorially and details its obligations beyond its territory. And this is translated into an obligation to also regulate that non-State actors do not cause harm extraterritorially.²⁶¹

The multinational corporations that have activities in different countries often establish different legal entities under the laws of the different States where they operate. This enables them to reduce the risk of legal or economic liability.

The Maastricht Principle 25 makes clear that States must make sure that businesses that they are in a position to monitor do not harm the enjoyment of economic, social and cultural rights in another country, as part of its obligation to protect.²⁶² This is valid for businesses that have its center of activity, is registered, is domiciled, or has its parent company in that first State.²⁶³

For those reasons, it can be said that States should protect the human rights from abuses of businesses even outside of their territory and that foreign mining companies in Katanga can be held accountable in their country of origin for human rights abuses and thus for violating the right to health, even if it was done by a Congolese subsidiary. That would be a way to mitigate the actual situation of impunity. However, for States, this is a positive obligation of means and not an obligation of results. Moreover, those Maastricht Principles are for now, only an academic exercise without any binding effect.²⁶⁴

²⁶⁰ United Nations, Guiding principles on business and human rights: Implementing the United Nations "Protect, Respect and Remedy" framework. (2011) Principle 2

²⁶¹ 'Human Rights Beyond Borders: UN Experts Call On World Governments To Be Guided By The Maastricht Principles' (Newsarchive.ohchr.org, 2021)
<<https://newsarchive.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=13792&LangID=E>> accessed 12 July 2021

²⁶² Fabrizio Marrella (2017) 146

²⁶³ ETO Consortium, 'Maastricht Principles On Extraterritorial Obligations Of States In The Area Of Economic, Social And Cultural Rights' (ETO Consortium 2013), Principle 25

²⁶⁴ Fabrizio Marrella (2017) 146

The case against Shell in Nigeria²⁶⁵ brings some perspectives on the possibility to hold transnational enterprises accountable for the harm they caused through a subsidiary, outside their territory. In the European Union, as well, a recent progress will be detailed below.

4. What about Europe's responsibility?

The European Union recognises the Guiding Principles as the "authoritative policy framework" in the field of corporate social responsibility. Since 2011, the European Commission has been encouraging EU Member States to develop National Action Plans (NAPs) to implement the Guidelines.²⁶⁶

The European Commission, in partnership with the EU countries, the European Investment Bank (EIB) and industrial actors has launched the European Battery Alliance in 2017. The goal is to create a manufacturing chain with sustainable battery cells in Europe.²⁶⁷

On the 1st January of this year (2021), The European Union brought a new regulation into force, namely the Conflict Minerals Regulation. In line with the OECD Guidance, the regulation aims to stem the trade in the same four minerals (tin, tantalum, tungsten and gold) known as financing conflicts in East DRC.²⁶⁸ The EU importers have now the obligation to identify the smelters and the refiners in their supply chain. They then have to investigate if their due diligence practices are correctly put in place and if not, they have to manage and report on it. The EU member States on their side have the duty to check if the EU importers comply with this new regulation.

The regulation does not concern the cobalt supply chain. While it might mark a step in the right direction, the law is not binding for companies and no sanctions are applied to companies that do not comply with it.

A real breakthrough regarding due diligence practices could be occurring in the next few months though. Last March (2021), The European Parliament adopted a resolution in favour of new binding EU legislation on due diligence for companies operating in the EU market.²⁶⁹ The aim is to force

²⁶⁵ Gbemre v. Shell Petroleum Development Company of Nigeria Ltd. and Others

²⁶⁶ Fabrizio Marrella (2017) 78

²⁶⁷ Alejandro González and Esther de Haan, 'The Battery Paradox: How The Electric Vehicle Boom Is Draining Communities And The Planet' (SOMO 2020) 23

²⁶⁸ 'Conflict Minerals Regulation Explained' (*Trade - European Commission*, 2021) <https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/index_en.htm> accessed 17 July 2021.

²⁶⁹ 'Fiche De Procédure: 2020/2129(INL) | Observatoire Législatif | Parlement Européen' (Oeil.secure.europarl.europa.eu, 2021) <[https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?lang=fr&reference=2020/2129\(INL\)](https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?lang=fr&reference=2020/2129(INL))> accessed 17 July 2021.

European companies to have clean value chains. It includes the activities of their subcontractors abroad.²⁷⁰ If human rights and the environment are not respected in the value chains, enterprises would face penal sanctions. The “Corporate due diligence and Corporate accountability” legislation would be the first European instrument to bind companies to have a clean supply chain. It would also mean an establishment of the legal responsibility of enterprises under European law.²⁷¹

At the Council of Europe level, the Committee of Ministers recognised the UNGP principles and encourages its member states to put them into practice. It also adopted in 2016 a detailed recommendation on human rights and businesses.²⁷²

On a personal note, I would say that Europe carries a certain responsibility in the violations of the right to health occurring in the context of the cobalt mines in DRC. With the adoption of the European Green Deal, the demand for mineral resources to assure the ecological transition is rising. The European Union affirms that it is possible to perform the ecological transition with the commitment to use sustainable minerals. However, to date, Europe still has not implemented an instrument that binds legally the companies to have a clean supply chain. Therefore, it is impossible for Europe to affirm it is using clean minerals and clean cobalt for the growing electric mobility for example. Until that legally binding instrument exists and is implemented and effectively monitored and enforced, Europe will carry a responsibility to contribute to human rights violations occurring because of the cobalt extraction in Katanga.

Moreover, because of its influence both as a political and economic actor, the European Union could clearly put pressure on the Congolese government and compel him to be rigorous in the application of its own law. On the contrary, very little, or nothing is done in that sense and the European member States hold more the position of defending their economic interests.

²⁷⁰ Rachida Boughriet, 'Devoir De Vigilance Des Entreprises : Le Parlement Européen Veut Durcir Les Règles' (*Actu-Environnement*, 2021) <<https://www.actu-environnement.com/ae/news/parlement-europeen-nouvelle-directive-devoir-vigilance-entreprises-37196.php4>> accessed 17 July 2021

²⁷¹ Leslie Brassac, 'Devoir De Vigilance Européen : «Les Entreprises Ne Vont Pas S’En Sortir En Bradant Les Questions Éthiques À La Sortie Du Covid», Maria Arena' (*Editions-legislatives.fr*, 2021) <<https://www.editions-legislatives.fr/actualite/devoir-de-vigilance-europeen-«les-entreprises-ne-vont-pas-sen-sortir-en-bradant-les-questions-ethiqu>> accessed 17 July 2021

²⁷² Fabrizio Marrella (2017) 78

5. To what extent are companies and governments responsible for the human rights violations occurring in the artisanal mining sector?

Artisanal mining represents a huge part of the mining sector in DRC. The few recognised artisanal mining areas (ZEA) in the Katanga region, leads to a situation where most artisanal miners dig outside those areas which makes them illegal under the Mining Code. Because of that illegal status, the State can avoid to tackle child labour or worker's health and safety.²⁷³ Moreover, artisanal mining may seem outside the reach of the social corporate responsibility initiatives taken by the multinational enterprises.²⁷⁴

Instead of aiming to make artisanal mining disappear or illegal, measures and policies should be taken to address issues affecting the ASM, namely safety and health issues as well as child labour. Moreover, the DRC government should regulate those illegal mining zones, formalise the artisanal cobalt operations, work towards an effective law enforcement and engage with the large-scale mining stakeholders to implement the community consultation procedures, and the protection of the local communities by diminishing negative impact on the environment.²⁷⁵

Measures that focus on ensuring international law, such as ILO international labour rights, or provisions from the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas are essential for helping create improvements at artisanal mining sites. Those improvements consist of eliminating child labour, ensuring safe working conditions, eliminating forced labour or any cruel, inhuman or degrading treatment, or other severe HR violations like sexual violence. Little by little the aim is also to reach stable family income and sustainable communities.²⁷⁶

There is a real need to formalise even more the ASM sector. It is an essential source of livelihood and eliminating it is not a solution. The jobs this sector creates can help reduce extreme poverty. The formalisation needs safer working conditions, ensuring representation of the miners, enhancing the health conditions, etc. In addition to the formalisation of the sector, it is of great significance to

²⁷³ ten Kate A, and Kiezebrink V, 'Responsible Mining: Cobalt' (the GoodElectronics Network 2016), 3

²⁷⁴ Yorbana Seign-Goura, 'État Des Lieux De La Responsabilité Sociale Des Entreprises De L'industrie Extractive En Afrique Centrale Et Au Tchad: Politiques Et Initiatives' (La Conférence des Nations Unies sur le Commerce et le Développement 2017) 5

²⁷⁵ Ibid.

²⁷⁶ ten Kate A, and Kiezebrink V, 'Responsible Mining: Cobalt' (the GoodElectronics Network 2016), 3

understand and address the underlying socioeconomic factors that cause extreme poverty in the region and the causes of permanent Human Rights issues in the DRC mining context. Affordable education and health services, diversification of the economic opportunities constitute first steps.²⁷⁷

The enterprises using cobalt from Katanga on their side, have failed to conduct human rights due diligence in their cobalt supply chains and many, including the biggest electronics or car brands, have been found unable to determine the origin of the cobalt they use. As a result, they are unable to address the human rights issues in those mines. It is therefore important that those companies recognise that they also have a responsibility in the mining phase, including the artisanal mining of cobalt.²⁷⁸ Therefore, they have to take initiative in cooperation with their suppliers to improve the situation in the mining sector including the working conditions in the artisanal mining sector.

In summary, different actors carry a responsibility in the human rights violations and the violation of the right to health in the Copperbelt.

The mining context in Mining companies benefit from the lack of enforcement of the regulation in DRC. The instruments are developed but they are not enforced. In general, companies, might them be mining companies or transnational companies further on the supply chain, need to implement effective human rights due diligence. However, until they are not legally bound to do so, negative impacts on the environment and on the health of the local communities will probably not be correctly faced.

The DRC had a triple responsibility in the violations of the right to health, as a State, as a shareholder of all the mining enterprises in DRC and because of its control over Gécamines.

Moreover, foreign states where multinationals that are part of the cobalt supply chain are domiciled, can be blamed because of the extraterritorial human rights obligations. And finally, Europe carries a part of responsibility by its influential status, its current position on environmental transition fostering cobalt demand and its lack of policy binding on a legal way the European multinationals operating in the DRC.

²⁷⁷ Baumann-Pauly D, 'Making Mining Safe And Fair: Artisanal Cobalt Extraction In The Democratic Republic Of The Congo' (World Economic Forum 2020) 4

²⁷⁸ ten Kate A, and Kiezebrink V, 'Responsible Mining: Cobalt' (the GoodElectronics Network 2016) 3

Conclusion

The region of Katanga, is the scene of violations of the right to health of cobalt miners and of the local populations. Adverse health effects are present because of the working conditions in the mines and because of the general pollution of the air, the water and the soil brought by the mining sector.

The mining context in Katanga is complicated as there is not a clear separation between the artisanal and the industrial sector.

There is a serious lack of law enforcement in the whole country and the mining sector is poorly or none controlled. The DRC in that sense does not comply with its obligation of protecting the right to health of its citizens. Mining enterprises violate the human right to health of their workers and are responsible for not putting in place measures to address the adverse effects of their operations. Transnational companies from the cobalt supply chain are also responsible to not carry out their due diligence policies and to not investigate and address the fact that there is cobalt coming from artisanal mining origin in their products. Moreover, they are also partly responsible, because of due diligence, for the health problems occurring in the region. There is however, place for improvement and some positive perspective with the discussions going on about creating a legally-binding due diligence instrument for transnational enterprises.

Lastly, the European Union also carries a part of the responsibility for those violations of the right to health. Encouraging and ruling for the shift towards an electric mobility in Europe creates an impressive increase in cobalt demand. If this does not go hand in hand with legislations making transnational enterprises accountable for human rights violations in their cobalt supply chain, or with political pressure on the DRC government for enforcing its laws, then it can be said that Europe displace pollution and human rights violation to another continent instead of eliminating them.

Word Count: 26 173

Bibliography

DRC legislation

Code Minier de la République Démocratique du Congo 2018

Constitution de la république Démocratique du Congo 2005, art. 58

République Démocratique du Congo, Code du Travail' (2002)

République Démocratique du Congo, 'Décret N° 18/042 Du 24 Novembre 2018 Portant Déclaration Du Cobalt, Du Germanium Et De La Colombo-Tantalite « Coltan » Comme Substances Minérales Stratégiques' (2018).

République Démocratique du Congo, 'Décret N° 038/2003 Du 16 Mars 2003 Portant Règlement Minier' (2003).

République Démocratique du Congo, 'Loi n° 18/035 du 13 décembre 2018 fixant les principes fondamentaux relatifs à l'organisation de la Santé publique' (2018)

International documents

A. Grover, Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, United Nations Human Rights, Office of the High Commissioner, A/HRC/20/15.

Organisation for Economic Cooperation and Development (OECD), *OECD Guidelines for Multinational Enterprises*, 25 May 2011

Organisation for Economic Cooperation and Development (OECD), *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas*, 6 April 2016

Organisation for Economic Cooperation and Development (OECD), *OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector*, 2 February 2017

International Labour Organization (ILO), *Safety and Health in Mines Convention*, 1995

United Nations, *Guiding principles on business and human rights: Implementing the United Nations "Protect, Respect and Remedy" framework*. (2011)

United Nations Committee on Economic, Social and Cultural Rights (CESCR), *General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12 of the Covenant)*, 11 August 2000, E/C.12/2000/4

United Nations Office of the High Commissioner for Human Rights (OHCHR), *Fact Sheet No. 31, The Right to Health*, June 2008, No. 31

United Nations Security Council, 'Final Report of The Group Of Experts On The Democratic Republic Of The Congo (S/2019/469)' (2019).

World Health Organization, Constitution of the World Health Organization 1946

African Union Documents

African Charter on Human and People's Rights 1986

African Commission on Human and Peoples' Rights, *224 Resolution on a Human Rights-Based Approach to Natural Resources Governance - ACHPR/Res.224(LI)2012*

African Commission on Human and Peoples' Rights, *Principles and Guidelines on the Implementation of Economic, Social and Cultural Rights in the African Charter on Human and People's Rights*, 2010

Factsheet African Charter, Health and Human Rights, WHO

Law

Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Section 1502

Publications

Afreview, 'AFREWATCH Requests The Kipushi Tribunal To Administer Justice With Independence In The Legal Case Of Public Ministry, Mamadou Mbolela And Others Vs. Mawazo And Others, The Compagnie Minière Du Sud Katanga (CMSK) And The DRC' (2015).

A Linna, 'Exposure To Cobalt In The Production Of Cobalt And Cobalt Compounds And Its Effect On The Heart' (2004) 61 Occupational and Environmental Medicine.

Alejandro González and Esther de Haan, 'The Battery Paradox: How The Electric Vehicle Boom Is Draining Communities And The Planet' (SOMO 2020).

Amnesty International, 'Democratic Republic Of The Congo: Time To Recharge: Corporate Action And Inaction To Tackle Abuses In The Cobalt Supply Chain' (Amnesty International Ltd 2017).

Amnesty International, 'Powering Change: Principles For Businesses And Governments In The Battery Value Chain' (Amnesty International Ltd 2021)

Amnesty International, 'République Démocratique Du Congo. Il Faut Trouver Des Solutions Pérennes À La Situation De Crise Dans Les Mines' (Amnesty International Ltd 2019).

Amnesty International, 'This Is What We Die For' (Amnesty International Ltd 2016).

Andrés Zaragoza Montejano, 'In Search of Clean Water: Human Rights And The Mining Industry In Katanga, DRC' (IPIS vzw 2013)

Association Congolaise pour l'Accès à la Justice, "*La Justice est privatisée en RDC*" (2012)

Banza CL and others, 'High human exposure to cobalt and other metals in Katanga, a mining area of the Democratic Republic of Congo' (2009) 109 Environ Res 745

Banza Lubaba Nkulu C and others, 'Sustainability of artisanal mining of cobalt in DR Congo' (2018) 1 Nat Sustain 495

Campbell B, editor, *Mining in Africa: Regulation and Development* (Pluto Press edn, 2009)

Cataleta, M., Human rights violations against children in the Democratic Republic of Congo, the international trade in minerals. (*Misión Jurídica*, 2020).

Cheyns K and others, 'Pathways of human exposure to cobalt in Katanga, a mining area of the D.R. Congo' (2014) 490 Sci Total Environ 313

Colette Braeckman, 'Congo : Le Cobalt, Désastre Écologique Et Sanitaire' *Le Soir* (2020).

Cotton A and others, 'Stratégies d'influences autour des ressources minières -Cuivre, Cobalt, Coltan- dans l'Est de la République Démocratique du Congo' (2014)

De Putter T and others, *Mining the Katanga (DRC) Copperbelt: geological aspects and impacts on public health and the environment—towards a holistic approach* (2011)

Dorothee Baumann-Pauly, 'Making Mining Safe And Fair: Artisanal Cobalt Extraction In The Democratic Republic Of The Congo' (World Economic Forum 2020)

Durojaye E, 'The approaches of the African Commission to the right to health under the African Charter' (2013) 17 *Law, Democracy & Development* 393

Eurasian Resources Group, 'The ERG clean cobalt framework: our commitment to responsible production' (2019).

ETO Consortium, 'Maastricht Principles On Extraterritorial Obligations Of States In The Area Of Economic, Social And Cultural Rights' (ETO Consortium 2013).

International Peace Information Service, 'The Formalisation Of Artisanal Mining In The Democratic Republic Of The Congo And Rwanda' (Center for International Forestry Research 2012)

Johnson D and Tegera A, *Digging deeper: how the DR Congo's mining policy is failing the country* (Pole Institute 2005)

Kaniki AT and Tumba K, 'Management of mineral processing tailings and metallurgical slags of the Congolese copperbelt: Environmental stakes and perspectives' (2019) 210 *Journal of Cleaner Production* 1406

Kayembe-Kitenge T and others, 'Agnathia Otocephaly: A Case From The Katanga Copperbelt' (2020) 112 *Birth Defects Research*.

Kayembe-Kitenge T and others, 'Holoprosencephaly: A case series from an area with high mining-related pollution' (2019)

Kayembe-Kitenge T and others, 'Incidence Of Congenital Malformations And Proximity To Mining In Lubumbashi, DR Congo' (2019) 3 *Environmental Epidemiology*.

Kayembe-Kitenge T and others, 'Respiratory Health And Urinary Trace Metals Among Artisanal Stone-Crushers: A Cross-Sectional Study In Lubumbashi, DR Congo' (2020) 17 *International Journal of Environmental Research and Public Health*.

K. Cheyns and others, 'Pathways of human exposure to cobalt in Katanga, a mining area of the D.R. Congo' (2014) 490 *Sci Total Environ* 313

Lange B and others, 'Copper and cobalt accumulation in plants: a critical assessment of the current state of knowledge' (2017) 213 *New Phytol* 537

Leysens L and others, 'Cobalt toxicity in humans-A review of the potential sources and systemic health effects' (2017) 387 *Toxicology* 43

Malpede M, 'The Dark Side of Batteries: Education, Fertility and Cobalt Mining in the Democratic Republic of Congo' (2020) *SSRN Electronic Journal*

Mariëtte van Huijstee, Victor Ricco and Laura Ceresna-Chaturvedi, 'How To Use The UN Guiding Principles On Business And Human Rights In Company Research And Advocacy A Guide For Civil Society Organisations' (SOMO, CEDHA, Cividep India 2012).

Marrella F, *Protection internationale des droits de l'homme et activités des sociétés transnationales* (Martinus Nijhoff 2017)

Mbwisi DM, 'The Protection of the right to health under the Constitution of the Democratic Republic of Congo' (2014) 47 *Verfassung und Recht in Übersee / Law and Politics in Africa, Asia and Latin America* 434

Mukendi RA and others, 'Exposure of man to metal trace elements and alteration of sperm parameters: study conducted in the mining areas of Haut-Katanga in the Democratic Republic of Congo' (2018) 30 *Pan Afr Med J* 35

Musa Obadia P and others, 'Erectile dysfunction and mining-related jobs: an explorative study in Lubumbashi, Democratic Republic of Congo' (2020) 77 *Occup Environ Med* 19

Olivier Bustin and Matthieu Le Roux, 'Democratic Republic Of Congo', *Mining 2020* (Tom Barnes 2020).

Perks R, 'How can public-private partnerships contribute to security and human rights policy and practice in the extractive industries? A case study of The Democratic Republic of Congo (DRC)' (2012) 37 *Resources Policy* 251

Scheele F, De Haan E and Kiezebrink V, 'Cobalt blues: Environmental Pollution and Human Rights Violations in Katanga's Copper and Cobalt Mines' (2016) *SOMO* 57

Sovacool BK, 'The precarious political economy of cobalt: Balancing prosperity, poverty, and brutality in artisanal and industrial mining in the Democratic Republic of the Congo' (2019) 6 *The Extractive Industries and Society* 915

ten Kate A, and Kiezebrink V, 'Responsible Mining: Cobalt' (the GoodElectronics Network 2016)

The Carter Center 'Les Investissements Miniers En République Démocratique Du Congo : Développement Ou Appauvrissement Des Communautés Locales?' (The Carter Center 2012).

Tsurukawa N, Prakash S and Manhart A, 'Social impacts of artisanal cobalt mining in Katanga, Democratic Republic of Congo'

Van Brusselen D and others, 'Metal mining and birth defects: a case-control study in Lubumbashi, Democratic Republic of the Congo' (2020) 4 *The Lancet Planetary Health* e158

van den Brink S and others, 'Identifying supply risks by mapping the cobalt supply chain' (2020) 156 *Resources, Conservation and Recycling*

Yorbana Seign-Goura, 'État Des Lieux De La Responsabilité Sociale Des Entreprises De L'industrie Extractive En Afrique Centrale Et Au Tchad: Politiques Et Initiatives' (La Conférence des Nations Unies sur le Commerce et le Développement 2017).

Websites

'African Union Set On Making Businesses More Responsive To Human Rights Through Development Of A Policy On Business & Human Rights - Business & Human Rights Resource Centre' (*Business & Human Rights Resource Centre*, 2017) <<https://www.business-humanrights.org/en/latest-news/african-union-set-on-making-businesses-more-responsive-to-human-rights-through-development-of-a-policy-on-business-human-rights/>> accessed 17 July 2021.

'Binding Treaty - Business & Human Rights Resource Centre' (*Business & Human Rights Resource Centre*, 2021) <<https://www.business-humanrights.org/en/big-issues/binding-treaty/>> accessed 17 July 2021.

Chancia Ivala Plaine, 'Succès Dans L'Affaire Du Peuple Ogoni - Nigéria : Mise En Cause Du Devoir De Diligence D'Une Multinationale Néerlandaise - Droit De L'environnement Pour L'afrique' (*Droit de l'environnement pour l'Afrique*, 2021) <<https://www.droit-de-lenvironnement-pour->

lafrique.com/2021/01/31/succes-dans-laffaire-du-peuple-ogoni-nigeria-mise-en-cause-du-devoir-de-diligence-dune-multinationale-neerlandaise/?fbclid=IwAR0JILsiwg0Rh799_WhkPZpvpieY95__rN6VZET4Ysd7WoPNoNxmmj6NIAM> accessed 10 July 2021.

'Cobalt DRC Case' (*International Rights Advocates*, 2021) <<http://www.iradvocates.org/case//cobalt-drc-case>> accessed 11 July 2021.

'Conflict Minerals Regulation Explained' (*Trade - European Commission*, 2021) <https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/index_en.htm> accessed 17 July 2021.

Dorothee Baumann-Pauly, 'Making Mining Safe And Fair: Artisanal Cobalt Extraction In The Democratic Republic Of The Congo' (*World Economic Forum*, 2020) <<https://www.weforum.org/whitepapers/making-mining-safe-and-fair-artisanal-cobalt-extraction-in-the-democratic-republic-of-the-congo>> accessed 2 July 2021,

Elena Nicolás, 'EU Commission Wants 30 Million Electric Cars By 2030' (*EUobserver*, 2021) <<https://euobserver.com/green-deal/150335>> accessed 14 July 2021.

'Fiche De Procédure: 2020/2129(INL) | Observatoire Législatif | Parlement Européen' (*Oeil.secure.europarl.europa.eu*, 2021) <[https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?lang=fr&reference=2020/2129\(INL\)](https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?lang=fr&reference=2020/2129(INL))> accessed 17 July 2021.

'Human Rights Beyond Borders: UN Experts Call On World Governments To Be Guided By The Maastricht Principles' (*Newsarchive.ohchr.org*, 2021) <<https://newsarchive.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=13792&LangID=E>> accessed 12 July 2021.

Leslie Brassac, 'Devoir De Vigilance Européen : «Les Entreprises Ne Vont Pas S'En Sortir En Bradant Les Questions Éthiques À La Sortie Du Covid», Maria Arena' (*Editions-legislatives.fr*, 2021)

<<https://www.editions-legislatives.fr/actualite/devoir-de-vigilance-europeen-«les-entreprises-ne-vont-pas-sen-sortir-en-bradant-les-questions-ethiqu>> accessed 17 July 2021.

'Lithium-Ion Batteries | Cobalt Institute' (*Cobaltinstitute.org*, 2021) <<https://www.cobaltinstitute.org/lithium-ion-batteries.html>> accessed 2 June 2021

Ololade Bamidele, 'AU Set On Making African Businesses More Responsive To Human Rights' (*Premium Times Nigeria*, 2017) <<https://www.premiumtimesng.com/business/business-news/227098-au-set-making-african-businesses-responsive-human-rights.html>> accessed 17 July 2021.

Patrice Bomboka, 'RDC: Les 9 Actions Phares De Willy Kitobo Samsoni À La Tête Du Ministère Des Mines' (*Zoom Eco*, 2021) <<https://zoom-eco.net/developpement/rdc-les-9-actions-phares-de-willy-kitobo-samsoni-a-la-tete-du-ministere-des-mines/>> accessed 2 June 2021.

'Pollution De La Rivière Kafubu: L'Etat Congolais, La Gécamines Et La CMSK Obligés De Payer 6 000 USD [Rép. Dém. Du Congo] - Business & Human Rights Resource Centre' (*Business & Human Rights Resource Centre*, 2014) <<https://www.business-humanrights.org/fr/dernieres-actualites/pollution-de-la-riviere-kafubu-letat-congolais-la-gecamines-et-la-cmsk-obliges-de-payer-6-000-usd-rep-dem-du-congo/>> accessed 9 July 2021.

Rachida Boughriet, 'Devoir De Vigilance Des Entreprises : Le Parlement Européen Veut Durcir Les Règles' (*Actu-Environnement*, 2021) <<https://www.actu-environnement.com/ae/news/parlement-europeen-nouvelle-directive-devoir-vigilance-entreprises-37196.php4>> accessed 17 July 2021.

Raf Custers, 'Congo : Les Multinationales Inlassablement En Opposition - Gresea' (*Gresea.be*, 2019) <<https://gresea.be/Congo-les-multinationales-inlassablement-en-opposition-1879-1879-1879-1879>> accessed 7 April 2021.

'Ruée Mondiale Vers Le Cobalt Congolais: La Chine, Médaille D'or' (*ladepeche.fr*, 2018) <<https://www.ladepeche.fr/article/2018/02/21/2746759-ruée-mondiale-vers-cobalt-congolais-chine-medaille-or.html>> accessed 1 May 2021.

UNDP, '2018 Statistical Update: Human Development Indices and Indicators.' (New York, 2018) <http://hdr.undp.org/en/content/human-development-indices-indicators-2018...>

Presentation

Vania Brino, 'Labour Law And Transnational Firm' (2021).