

# **CHILD LABOUR IN MINING IN INDIA AND THE DRC: TWO CASE STUDIES**

by

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## Declaration

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## Abstract

Child mining is an environmental issue because mining is an environmental issue and children occupy and utilise the environment. As part of the fulfilments of the Sustainable Development Goals (SDGs), there has been an international commitment to eradicate child labour by 2025. Children in artisanal small-scale mines (ASM) work up to twelve hours in the mines, without any protective gear, are exposed to high concentrations of radioactive cobalt, susceptible to various health complications; and the lack of access to public healthcare is a further violation of their human rights. Data from the ILO shows that in 2016 more than 40 million people were victims of modern slavery and 152 million children aged 5 to 17 were engaged in child labour.

This data informs the research questions that guide the dimensions of my thesis and what I aim to address, and they are firstly, how do the different stakeholders in society, including communities, companies, NGOs, and the state respond to child labour? Secondly, how effective are current policies purporting to address child labour in mining, if at all, and in which respects do they fail (and why)? And finally, what are the gaps in current policies, and what can be done to improve upon them? In order to answer the research questions, peer-reviewed articles and books were consulted as well as journalistic works and reports from activist groups.

The industrial revolution in Britain provided a historical context of child labour, as discussed in the Introduction. The review of literature illustrated the inadequacy of the *one-size-fits-all* model and the moral issues of discounting the value of the poor and disenfranchised, and allocating the rich all the power, a point that will be illustrated by my case studies. Two case studies were conducted, one of child labour in the mining of mica in India (Jharkhand Province), and one of child labour in the mining of cobalt in the Katanga Province of the Democratic Republic Congo. The DRC has taken notable actions to formalise its artisanal cobalt mines as a way of managing the sector due to the increasing international pressure and Huayou Cobalt, Volkswagen, and Tesla have joined in helping the government ensure “ethical and safer practices” are upheld in the electronics industry. However, the involvement and inclusion of the child miners’ stories and experiences in these responses is still at the foundation phase of creating awareness and providing information.

I further argue that theoretical frameworks such as the Jharkhand Sustainable Mica Policy Framework and those discussed in the DRC case study seem to be the closest models of the

multi-stakeholder outlook towards ending child mining that I propose. With a global shift to formalising the ASM sector, the question I pose in the final instance is whether 10g of cobalt in my cell phone's battery, or 15kg in an electric car's battery is really worth it.

## Opsomming

Kindermynbou is 'n omgewingskwessie omdat mynbou 'n omgewingskwessie is en kinders die omgewing beset en benut. As deel van die implementering van die Volhoubare Ontwikkelingsdoelwitte (SDG's), is daar 'n internasionale verbintenis om kinderarbeid teen 2025 uit te roei. Kinders in kleinskaalse myne (ASM) werk tot twaalf uur in die myne, sonder enige beskermende toerusting, word blootgestel aan hoë konsentrasies radioaktiewe kobalt, is vatbaar vir verskeie gesondheidskomplikasies; en die gebrek aan toegang tot openbare gesondheidsorg is 'n verdere skending van hul menseregte. Data van die IAO toon dat meer as 40 miljoen mense in 2016 slagoffers van moderne slawerny was en 152 miljoen kinders van 5 tot 17 jaar oud was betrokke by kinderarbeid.

Hierdie data onderlê die navorsingsvrae wat die dimensies van my tesis rig, en die doelstellings wat ek beoog om aan te spreek, en dit is eerstens, hoe reageer die verskillende belanghebbendes in die samelewing, insluitend gemeenskappe, maatskappye, NRO's en die staat op kinderarbeid? Tweedens, hoe doeltreffend is huidige beleide wat veronderstel is om kinderarbeid in mynbou aan te spreek, indien enigsins, en in watter opsigte misluk dit (en hoekom)? En laastens, wat is die leemtes in huidige beleide, en wat kan gedoen word om op hulle te verbeter? Ten einde hierdie navorsingsvrae te beantwoord, is eweknie-geëvalueerde artikels en boeke geraadpleeg asook joernalistieke werke en verslae van aktivistegroepe.

Die industriële revolusie in Brittanje wat 'n historiese konteks verskaf vir kinderaarbeid word in die Inleiding bespreek. Die literatuuroorsig illustreer die ontoereikendheid van die *een-grootte-pas-almal*-model, en die morele kwessies dat die waarde van die armes en ontnemdes misken word, en alle mag aan die rykes toegeken word, 'n punt wat deur my bevestig sal word. Twee gevallestudies is uitgevoer, een van kinderarbeid in die ontginning van mika in Indië (Jharkhand Provinsie), en een van kinderarbeid in die myn van kobalt in die Katanga Provinsie van die Demokratiese Republiek van Kongo. Die DRK het in respons op toenemende internasionale druk noemenswaardige aksies geneem om sy bestuur van kleinskalige kobaltmyne te formaliseer, en Huayou Cobalt, Volkswagen en Tesla het bygedra om die regering te help verseker dat "etiese en veiliger praktyke" gehandhaaf word in die elektroniese industrie. Die betrokkenheid en insluiting van die stories en ervarings van kindermynwerkers in hierdie response is egter nog by die grondslagfase van bewustheid skep en inligting verskaf.

Ek argumenteer verder dat teoretiese raamwerke soos dié van die Jharkhand Sustainable Mica Policy Framework en dié wat in die DRK-gevallestudie bespreek is, die naaste modelle blyk te wees van die multi-belanghebbende benadering tot die beëindiging van kindermynbou wat ek voorstel. Met 'n globale verskuiwing na die formalisering van die ASM-sektor, is die vraag wat ek uiteindelik stel of 10 g kobalt in my selfoon se battery, of 15 kg in 'n elektriese motor se battery regtig die moeite werd is.

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## List of Abbreviations

ASM	Artisanal Small-Scale Mining
BBA	Bachpan Bachao Andolan
BSR	Business for Social Responsibility
BV	Basu and Van model
CDM	Congo Dongfang Mining
CEGA	Center for Effective Global Action
CLDA	Child Labour Deterrence Act
CLPRA	Child Labour Prohibition and Regulation Act
CRC	Convention on the Rights of the Child
CSR	Corporate Social Responsibility
DOL	Department of Labour
DRC	Democratic Republic of Congo
FARDC	Forces Alliances Republique Democratic Congo
GBV	Gender-based Violence
GMACL	Global March Against Child Labour
HRW	Human Rights Watch
ILO	International Labour Organisation
ILRF	International Labor Rights Fund
IOM	International Organisation for Migration
IOE	International Organisation of Employers
IPEC	International Programme on the Elimination of Child Labour
IUCN	International Union for Conservation of Nature
MAP	Measurement, Awareness-Raising and Policy Engagement
MNC	Multinational Company/Corporation
MOD	Ministry of Defence
MOGF	Ministry of Gender and Family
MOJ	Ministry of Justice and Human Rights
MOL	Ministry of Employment, Labour and Social Welfare
MOLE	Ministry of Labour and Employment
MWCD	Ministry of Women and Child Development
NCCL	National Committee to Combat the Worst Forms of Child Labour

NCLP	National Child Labour Project
NGO	Non-governmental organisation
NRSC	Natural Resources Stewardship Circle
OECD	Organisation for Economic Co-operation and Development
RMI	Responsible Mica Initiative
SAESSCAM	Service d'Assistance et d'Encadrement du Small-Scale Mining
SDG	Sustainable Development Goal
SHG	Self-Help Group
SOE	State-owned Enterprise
UAE	United Arab Emirates
UMHK	Union Minière du Haut Katanga
UN	United Nations
UNICEF	United Nations Children's Fund
US	United States
USAID	United States Agency for International Development
WTO	World Trade Organisation
ZEA	Zones d'Exploitation Artisanale

# Chapter 1: Introduction

## 1.1. Background

The United Nations General Assembly declared 2021 as the ‘International Year for the Elimination of Child Labour’ and asked the International Labour Organization (ILO) to spearhead its implementation (ILO, 2019a). With this resolution, this thesis highlights why it is important to have a study that aims to analyse the problem of child labour in the mining industry worldwide. Data released by the ILO (2017c) indicates that child labourers in the mining industry make up the lowest percentage of children engaged in work. That being said, I believe that this should be the easiest industry to tackle and combat, since the efforts would be less.

The ILO defines child labour as “work that is hazardous, demands too many hours, or is performed by children who are too young” (ILO, 2017b). The fact that this work “puts their well-being at risk, deprives them of time for healthy childhood play or denies them their right to education” is also a major problem, which is where the distinction is drawn between normal work (basic household chores), and child work/labour (ILO, 2017b). Ampomah and Gyan (2014:73) add to the child labour conversation and concept by pointing out that having children engage in the work force means that their intellectual, physical, social, and emotional development is stunted, thus depriving them of a childhood. The rights of children, especially those engaged in work, are also documented in the Convention on the Rights of the Child (UNICEF, 1989) and ILO Convention No. 182 on the Worst Forms Child Labour (ILO, 1999). On the basis of these documents all signatory states are expected to increase their efforts to combat the human rights violation of child labour and ultimately ensure the protection of children (Ampomah & Gyan, 2014:73). There are numerous factors, however, that contribute to the prevalence of child labour in the present day which include poverty and limited access to education (Hindman and Smith, 1999:25). These factors will be further elaborated in this thesis.

### 1.1.1. Historical context of child labour in mining

To provide an in-depth look of child labour from a historical perspective, the industrial revolution in Britain is an apt case study to begin with. While countries such as the United States, Belgium and France also experienced the industrial boom of the time (Hindman & Smith, 1996:26), for the purpose of this introduction I have chosen to focus on the experience

of working children in Britain. This section highlights the "extent and duration" of child labour in Britain, and as Humphries (2003:180) describes, it was experienced largely in Britain and propelled the nation's development. She goes further to add that Belgium was the second greatest country to benefit from child labour in the 19th century (Humphries, 2003:180). Hindman and Smith (1999:26) support this statement by saying that Great Britain was the pioneer of child labour, and thus the first to commodify the labour of said children. However, it is imperative that I note the lack of literature on the history of child labour outside of Europe and in the United States – while the industrial revolution in Europe and the United States began in the 1800s, the effects of child labour in South Africa and Zimbabwe – colonial states of Britain – where only experienced in the 1920s, as captured by Grier (1994:27). The industrial revolution lasted from 1760 to 1830 and saw child labour being one of the trade-offs for the development and advancement of the British nation (Hindman & Smith, 1999:26). Child labour was seemingly crucial to the initial phases of industrialisation because of the large-scale production that occurred at the time, particularly in the mining and textile industries (Humphries, 2003:176). According to Humphries (2003:177), children and adolescents made up one- to two-thirds of the employees in the textile industry in 1833, and more than a quarter of employees in the mining industry in 1842. Charles Dickens, William Blake, and Elizabeth Browning are a few writers to have shed light on the issue of child labour and the failure of the regulations put in place during Victorian England.

When looking at child labour prior to industrialisation, Carolyn Tuttle notes that the practice dates back to medieval times where children were made to spin thread for their fathers, who wove on the loom, as well as other tasks that supplemented the family's economy (Tuttle, 2001). Preindustrial occupation that children engaged in ranged from farm work to domestic work that often included some form of apprenticeship. Farm work included planting seeds in fields, pulling weeds, looking after cattle, milking cows, or even harvesting ripe produce (Tuttle, 2001). The domestic-type of work included being apprentices, chimney sweeping, being domestic servants or assistants in family businesses – as seamstresses, potters, or shoemakers (Tuttle, 2001). The working hours varied based on the type of work the children engaged in and other factors, such as weather and family events. Such labour done by children was not problematic according to society or even the law because it was considered crucial to the family's survival as well as child development (Tuttle, 2001). What follows, however, is a tipping point.



With textile mills being built around 1769 and child apprentices being hired as primary workers, the definition of ‘child labour’ began to change and this was exemplified by the depiction of such places as “dark satanic mills” by Dickens (Tuttle, 2001). Long working hours were a norm for children. The change or tipping point came from the “harsh punishment, unhealthy working conditions, low wages and inflexible working conditions,” as described by Tuttle (2001). In the factory industry, child apprentices were often paupers who came from orphanages and workhouses – who, although they were clothed and fed – received no remuneration for their work at the mills (Tuttle, 2001). The *First Factory Act of 1802* was passed in order to improve the conditions of apprentices, but this, together with the invention of the steam engine, meant that orphan apprentices were no longer needed as the industry was able to expand. The change was that children from poor and working-class families were hired (Tuttle, 2001). With an increase in the number of children engaged in child labour, Tuttle (2001) describes the opposition that arose from people such as Marx (1909), Webb and Webb (1898), as well as Alfred (1857), because they believed that the working conditions of children in factories were deplorable and the children were being exploited (Tuttle, 2001). Proponents of child labour argued that employment of children was beneficial not only to the children, but to families and ultimately, the country. It did not help that there was support from religious schools – an example being John Wesley – the founder of Methodism (Tuttle, 2001). John Wesley believed that child labour meant that there was less likelihood for children to engage in youthful idleness and depravity (Tuttle, 2001). Some legislature that was ratified in response to the growing practice include the passing of the *Cotton Factories Act of 1819* (which stipulated the minimum working age as 9 and the maximum working hours as 12), the *Regulation of Child Labour Law of 1833* (which paid inspectors to enforce child labour laws) and finally, the *Ten Hours Bill of 1847* which limited working hours of women and children to 10 (Tuttle, 2001).

When looking at child labour statistics in the mining industry at the time, Tuttle (2001) reported that children constituted large amounts of the labour force in coal and metal mines in Britain – ranging from 19 to 40 percent. In 1838 it was found that after surveying 124 tin, copper and lead mines in Cornwall, children were employed in 85 percent of these mines and a decline only began in 1870 – which was 28 years after the ratification of the *Mining Act of 1842* (Tuttle, 2001). The *Mining Act of 1842* stated that women and children were forbidden to work in mines. Around this time, a third of the underground workforce in coal mines consisted of

children below the age of 18, and a fourth of the employees on metal mines were below the age of 18 (Tuttle, 2001).

### 1.1.2. The current situation

Data from the ILO shows that in 2016 more than 40 million people were victims of modern slavery and 152 million children aged 5 to 17 were engaged in child labour (ILO, 2017c). As part of the fulfilments of the Sustainable Development Goals (SDGs), there has been an international commitment to eradicate child labour by 2025. This involves the cooperation of governments, business, the finance sector as well as civilians fighting together to address the causes and factors contributing to child labour (ILO, 2019c:5). In the joint report by the ILO, the Organisation for Economic Co-operation and Development (OECD), the International Organisation for Migration (IOM) and the United Nations Children’s Fund (UNICEF), they recognise that although there have been improvements in the capturing of child labour data, compiling a database as to how people in child labour and forced labour constitute the “production and consumption linked to global supply chains remains a significant challenge” (ILO, 2019c:7). Mapping the intricacies of ‘source to sink<sup>1</sup>’ in the supply chain and detailing the degree of child and forced labour is complex and not something that can be done at this point. However, the OECD attempted to estimate the contribution of child labour to exports and compared it to the share of value added to the domestic production and consumption as seen in Figure 1 below. It can be seen in the illustration that regions where child labour is rampant, have a decreased contribution to global supply chains (ILO, 2019c:8).

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<sup>1</sup> This term is another way of saying from ‘cradle to grave’ or ‘origin to end.’

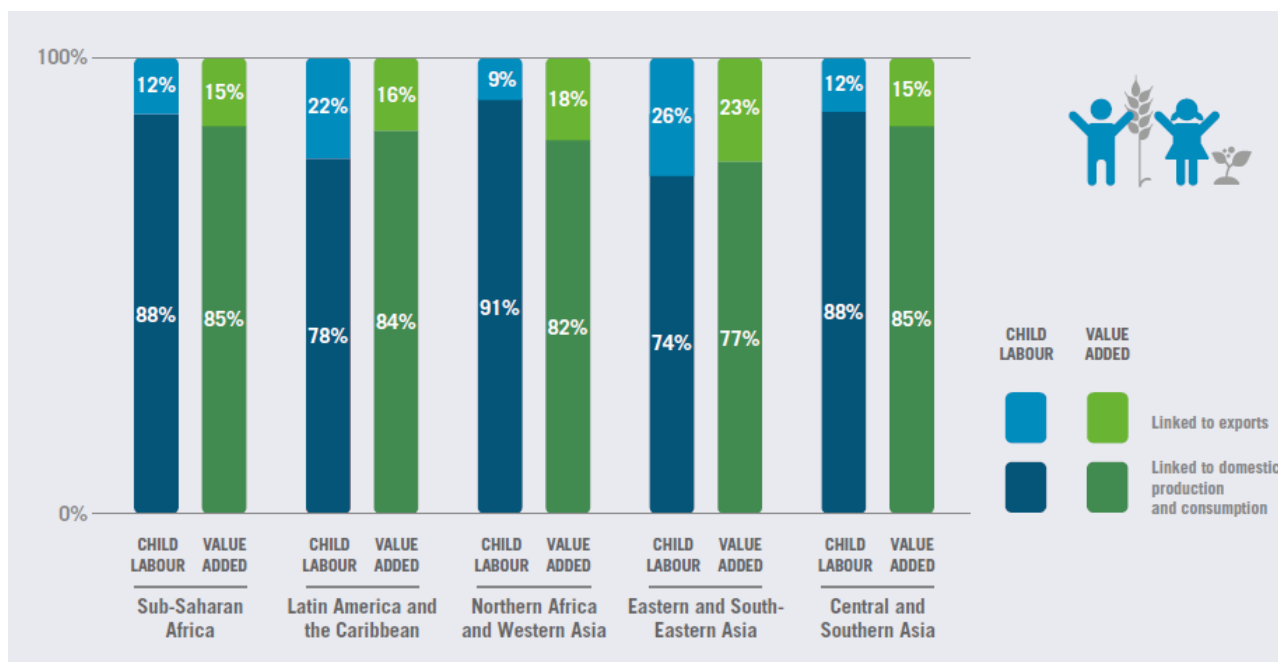


Figure 1- Child labour estimates and value added for exported goods & services, per region in 2015

Source: ILO, 2019c:8.

The risk factors that seem to be associated with child labour in global supply chains are primarily the gaps in legislature, lack of enforcement and non-compliance; socio-economic factors on individuals and employees and lastly, business conduct and working environment (ILO, 2019c:10). These factors will be analysed in depth in the following chapters in the context of my case studies; however, it is important to note that these factors are no different to those that existed in the industrial revolution Britain as detailed by various academics. The main factors they listed as determinants of child labour are:

- i. Size of household (Grootaert & Kanbur, 1995)
- ii. Structure of the labour market (Grootaert & Kanbur, 1995; Edmonds, 2003)
- iii. Technology (Grootaert & Kanbur, 1995; Humphries, 2003)
- iv. Poverty (Edmonds, 2003)
- v. Education (Edmonds, 2003).

The interaction of these factors is described in further detail in the literature review of Chapter 2 and the contribution of these five factors to the present-day existence of child mining is highlighted in the case studies.

To spotlight current child labour in mining, I will look in depth at case studies of child labour in mining in India and the DRC in Chapters 3 and 4 respectively. In this section however, I will

elaborate on the severity of this practice and it how it can be paralleled to modern slavery. Although various overviews of artisanal small-scale mining (ASM) have been conducted in Asia and Africa, accurate representations are still difficult to find since most of these operations are often illegal (O’Driscoll, 2017:2). Countries in these regions where child mining practices are prevalent include Tanzania, India, Indonesia, Uganda, the Democratic Republic of Congo (DRC), Burkina Faso, Ghana, Philippines, Mali, Niger, and Nepal (O’Driscoll, 2017:5-7). Tracking the supply chain of minerals involving child labour as they make their way to Europe is difficult and by the time these minerals arrive there, the responsibility is lost because the path is informal and usually unlawful (O’Driscoll, 2017:7). Gold exported from Tanzania is usually done so by traders and brokers who operate from unlicensed mines and makes its way to the United Arab Emirates (UAE), Switzerland, China and even the United Kingdom – with Dubai being the primary buyer (O’ Driscoll, 2017:7). In the DRC on the other hand, adult miners sell cobalt directly to licensed buying houses which sell to larger mining companies – which by doing so, erases the trace of child labourers as these larger companies smelt the cobalt and export the processed cobalt ore (O’Driscoll, 2017:7). Amnesty International is said to argue that this cobalt is sold to a cobalt company based in China (Huayou Cobalt) which sells to battery component manufacturers in China and South Korea – these manufacturers end up selling these parts to well-known consumer brands (O’Driscoll, 2017:7-8). Ultimately, the end-products are sold to consumers who are oftentimes uninformed about the existence of child labour in the mining process of the product components. The evidence presented by Amnesty International illustrates the unethical business practices of having an obscured supply chain and neglecting responsibility – which speaks to the need for improved policy regulation when it comes to implementation.

As such, the existence of child labour has far-reaching implications for implementing the UN (United Nations) Sustainable Development Goal (SDGs) target 8.7, that cannot be attained without successful and rigorous efforts to fight modern slavery and child labour (ILO, 2017c). In fact, when looking at the data collected in 1996 and comparing it to that from 2016, there seems to be an increase in the number of children engaged in child labour. The ILO released data in 2016 estimating that 152 million children between the ages of 5 and 17 were subjected to child labour (ILO, 2017c) and 11.9 percent of child labourers work in the industry sector, which is the focus of this study. 64 million of the children subjected to labour are girls, and 88 million are boys. The highest number of children engaged in child labour are in Africa (72.1 million), followed by Asia and the Pacific (62 million), then the Americas (10.7 million), then

Europe and Central Asia (1.2 million) and finally the Arab States which constitute 1.2 million (ILO, 2017c). Data published also indicated that only a third of children aged 5 to 14 were enrolled in school, and of those children were engaged in work in 2016 – 38 percent of children aged 5 to 14 were engaged in hazardous work (ILO, 2017c). Additionally, almost two thirds of children aged 15-17 worked more than 43 hours a week (ILO, 2017c).

### 1.1.3. Formal measures in place to combat child labour and slavery

#### 1.1.3.1. International Labour Organisation

The International Labour Organization (ILO) is an agency of the UN that was established in 1919 and focuses on everything that encompasses work, globally (ILO, 2017c). The ILO “sets international labour standards, promotes rights at work and encourages decent employment opportunities” amongst other mandates that it has (ILO, 2017c). The organisation currently has 187 member states. It was in 1973 that the ILO Minimum Age Convention (No. 138) was adopted to ensure the abolishment of child labour through enforcing strict minimum age admission requirements for employment – ratified by 135 countries (Thévenon & Edmonds, 2019:15). This convention encouraged countries to set the minimum age of work as 15, with some laws allowing for children engaged in “light work” to start working anywhere between 13 and 15 years of age upon indicating that the work they would be engaged in would not be detrimental to their health nor their education (Thévenon & Edmonds, 2019:15). The minimum age for ‘hazardous work’ was set to 18 and the definition of ‘hazardous work’ was given as work that “is likely to jeopardise the health, safety or morals of a young person” (Thévenon & Edmonds, 2019:15).

#### 1.1.3.2. United Nations

The problem of child labour has been addressed under the blanket of human rights abuse and is often viewed through the lens of ‘modern-day slavery.’ The Universal Declaration of Human Rights was adopted by the United Nations (UN) General Assembly in 1948 (UN, 1948). This human rights declaration was aimed at ensuring “the promotion of universal respect for and observance of human rights and fundamental freedoms.” (UN, 1948). Articles that are important in the human rights declaration are: 4 and 23-26. Article 4 refers to slavery, Articles 23 and 24 speak to work-related matters, Article 25: standard of living, and Article 26 refers to liberties of education (UN, 1948). These articles allude to themes that are pertinent to factors

and limitations in child labour<sup>2</sup>. In 1992, the UN started the International Programme on the Elimination of Child Labour (IPEC) in efforts to combat child labour by reinforcing national capacities to tackle the causes of child labour. One of the aims of the initiative is to achieve worldwide access to primary school education (ILO, 1992; Thévenon & Edmonds, 2019:15).

### 1.1.3.3. OECD

The OECD (Organisation for Economic Co-operation and Development) has various frameworks and working papers aimed at addressing the issue of child labour. The *Guidelines for Multinational Enterprises* were released as recommendations offered by governments to multinational companies (MNCs) to ensure that MNCs' operations are aligned with government policies (OECD, 2011:13). The cooperation and commitment of various governments and stakeholders to these guidelines means that there is strengthened business conduct in the international legal and policy frameworks. An example of this is the commitment to the 1948 UN Universal Declaration of Human Rights (OECD, 2011:15). Because of the state's duty to protect human rights, enterprises are expected to also function within the scope of internationally recognised human rights as well as heed to national laws and regulations such as:

- Respecting human rights and ensuring that there are no human rights violations, and in the unfortunate case of human rights infringement – they will address the adverse impacts, especially in their own activities
- Enterprises will aim to prevent negative human rights impacts linked to their business operations – including their products and/or services. They should seek to uphold this in business associations as well.
- Enterprises are expected to have a policy commitment to respecting human rights.
- Due diligence is expected from enterprises when they carry out human rights, meaning that there is an appropriate response depending on size, context, and severity of consequences.

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<sup>2</sup> Article 4: “No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms” (UN, 1948).

Article 23.1: “Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment (UN, 1948).

Article 24: “Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay” (UN, 1948).

Article 25.1: “Everyone has the right to a standard of living adequate for the health and well-being ... including food, clothing, housing ... necessary social services, and the right to security in the event of unemployment, sickness ... or lack livelihood in circumstances beyond his control” (UN, 1948).

Article 26.1: “Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory” (UN, 1948).

- Finally, enterprises are expected to make allowances as well as cooperate with processes of remediation should it be established that their activities have caused or contributed to negative human rights impacts (OECD, 2011:31).

Under the employment and industrial relations chapter of the guidelines it is explicitly stated that enterprises should “contribute to the effective abolition of child labour and take immediate and effective measures to secure the prohibition and elimination of the worst forms of child labour as a matter of urgency” (OECD, 2011:35). Based on the knowledge we have on the supply chain of products created with the direct or indirect contribution of child labour, and as I will demonstrate in my two case studies of India and the DRC<sup>3</sup> there is evidence that MNCs have neglected this commitment. Chapter 8 of the guidelines entails ‘Consumer Interests’ which includes a point that states that enterprises should not engage in deceptive practices nor make omissions to their consumers (OECD, 2011:52). However, consumers are often not informed about the involvement of children in the production of their products – further proof that MNCs are not committed to abiding by the guidelines for a transparent supply chain.

#### **1.1.3.4. What is happening in different countries?**

In an investigation conducted by *The Guardian*, it was found that there is rampant child labour taking place in developing countries such as Malawi, Mexico, and Indonesia – as well as in countries such as Bangladesh, Brazil, and Zimbabwe (Boseley, 2018). The investigation was centred on child labour in the tobacco industry in 2018, specifically. The lack of consideration of end-consumer users is being highlighted once more, providing more evidence of the effect of rough conditions on the lives of children in the billion-dollar tobacco industry. Multinational corporations are aware of the responsibility they have to tackle not only the problem of child labour, but the effect of children working on a product that is lethal and can affect the lives of such children (Boseley, 2018).

The literature review of chapter 2 will aim to highlight that child labour practices seemingly coincide with a nation’s aim to industrialise. This had been observed in Britain, the United States of America and France (Browne, Frondorf, Harrison-Spoerl & Krishnan, 2004:4). In my two case studies and based on the data from Hindman and Smith (1992:21), I will demonstrate

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<sup>3</sup> Bliss, S. 2017. Child mining in India’s mica mines.; Amnesty International. 2016. “This is what we die for”: Human rights abuses in the Democratic Republic of Congo power the global trade in cobalt; and Human Rights Watch (HRW). 2016. Human rights in supply chains: a call for binding global standard on due diligence. As I will demonstrate in further detail in my case studies below, these sources provide a brief description of what has been occurring in India and the DRC, respectively.

that developing nations in Asia and Africa seem to be following this same trend of making use of child labour as a means to promote industrialisation.

Developing nations in Asia and Africa seem to be following this same trend of child labour occurring as a means to industrialisation Hindman and Smith (1999:21). As indicated above, the ILO has been dubbed as the custodian of labour laws, and it has acknowledged that developing countries cannot be held at the same standards as developed countries in terms of the labour sector, thus, different age limits for child labour have been proposed in the two different ends of the world (Browne et al., 2004:36).

## 1.2. Child labour as an ethical problem

According to Kernohan (2012:6), issues of values and morality make an essential part of environmental ethics and the application thereof. These issues can be raised based on a personal, relational and/or policy level. Kernohan (2012:6) further states that the effective application of environmental ethics in policy- and decision-making needs to be held in the same regard as the application of scientific and economic theoretical frameworks in environmental policymaking. Ethical theories are described as “attempt[s] to systemize our ethical judgements with a smaller number of principles” (Kernohan, 2012:6). For child mining to qualify as an environmental ethic problem, there needs to be (i) a *moral agent*, that performs (ii) an *action* that has (iii) a *consequence* for the victim that is a (iv) *recipient* of the consequence, as Kernohan (2012:7) explains. I contend, and as I will demonstrate in my two case studies, that child miners are victims of the poor and ethically unacceptable mining practices that are kept hidden from the global supply chain of the mined minerals that supply crucial components in the manufacturing process of products made by of MNCs. Considering there are multiple stakeholders in the mining practice, the failure of government’s legislation, the lack of regulation, and the inconsistent implementation from international labour and human rights organisations – especially those that are meant to protect children, means that these entities are also being responsible in the perpetuation of child mining as a practice.

What is important to note in the approach of Kernohan (2012:6) to environmental ethics, is that the recipients (the child miners) are given *moral standing*, i.e., they are regarded as worthy of moral consideration on the basis of their intrinsic value as human beings. Kernohan further elaborates that an “entity” is given moral standing if one needs to consider its interest on its



own behalf or for “its own sake” when ethical judgements are being made. Thus, by applying this approach to environmental ethics in the context of child labour, there is no compromise on the need for better attention to ethical dimensions and standards. After all, children labouring in mines are not “entities”, but humans in their own right, and above all, coming from poor and marginalized homes, they constitute a highly vulnerable group in need of protection and support. Kernohan’s approach this allows me to introduce ethical principles when considering the intersection between agent, action, consequence and recipient(s) in the discussion and analysis of the decisions and recommendations linked to stakeholders involved in child mining, regardless of whether they are enabling child labour in mining, or are engaged in efforts to eradicate it.

The specific ethical dimensions I will delve into in this thesis will not go further into analysis of theoretical frameworks and literature of ethics theory than I have introduced and described by referring to Kernohan (2012). Rather, my thesis focuses on the broad normative consensus in society that child labour is unacceptable in ethical terms, and that society at large has a duty to eradicate its causes and its manifestation globally. Accordingly, I will track and assess the past legislation, regulatory frameworks, authoritative bodies and international guidelines and conventions that have sought to address this terrible mining practice, and in this regard hone in on the respective manifestations and challenges to this normative consensus in the context of my case studies in India and the DRC. Together with the global destruction of the environment that calls for a transition toward sustainability, the perpetuation of child labour feeds into the deterioration of the planet and contributes to the conversation on climate change. Climate change is understood to exist because of the driving forces of industrialisation, capitalism, development, and globalisation that see us discussing the socio-economic and greater environmental issues faced today. It is within this context that child labour in mining is not only a concern of human rights abuse, but also of environmental devastation.

The initial reaction to the idea of child labour is often disgust and abhorrence and the exploitative aspect and negative effects on growth and development are not the only factors that bring about this reaction (Browne et al., 2004:14). In their paper, Barry and Øverland (2011:190) seek to interrogate the moral sacrifices one would make to save a dying child, as influenced by the line of argument of Peter Singer and Unger.<sup>4</sup> Children are most affected by

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<sup>4</sup> Singer-Unger argument seeks to explore “the issue of principles for the determining required cost by examining simple cases in which an affluent person can save a child in front of them at some cost,” as quoted by Barry and Øverland (2011:190).

poverty, with 218 million of them participating in the labour market in 2006, according to the United Nations Children's Fund (UNICEF) statistics. Of the 218 million, 126 million of these children were engaged in hazardous work and there are many others who have died due to poverty-related circumstances (Barry & Øverland, 2011: 189-190).

In his book titled: *Slow violence and the environmentalism of the poor*, Rob Nixon (2011) provides another ethical lens that allows this thesis to critique the moral failing that child mining is to society. Nixon (2011:2) describes "slow violence" as violence that unfolds gradually and "out of sight" – as it manifests in the practice of child mining, as my case studies of India and the DRC will demonstrate. Furthermore, Nixon asks: "How can we turn the long emergencies of slow violence into stories dramatic enough to rouse [the] public and warrant political intervention ...?" In turn, I add, how dramatic should the description of the case studies have to be to warrant child mining as an environmental problem and a humanitarian crisis? Nixon answers this by explaining what he means by the "environmentalism of the poor" stating that this relates to issues concerning the people who are often at the receiving end of *slow violence*, those lacking resources and are vulnerable to poverty – "disposable" people, whose lives in misery and whose deaths cannot be grieved (2011:3). These "poor" people are described to be found on the disenfranchised side when it comes to "ethnicity, gender, race, class, region, and generation. He continues to say that these "impoverished communities" are subjected and are vulnerable to a militarised economy and development, coercion, and bribery.

The lack of informed consent on the part of children and the lack of maturity is also what brings about the "moral repugnance" that Browne et al. (2004:14) refer to. However, the notion that developing countries need to just embrace child labour as a stage in development and the hope that developing countries undergo this stage quickly as described by Browne et al. (2004:38) is also highly problematic. Arguments made also include the fact that developing countries often lack the capacity and resources to address child labour and rapid globalisation as the cause of child labour – there also seems to be controversy surrounding the correlation between child labour and trade (Browne et al., 2004:38-40).

Moving to the actual lives lived by the child labourers, the ethical issues are placed in sharper relief. There have been two main factors attributed to the prevalence of child labour – poverty and lack of education. Children are often roped into being labourers because of the poverty faced by their families (Roy, 1998:26). When children are employed as workers, employers extort such children by paying them less and manipulating them (Garg, 1999:481; Roy,

1998:26). The fact that children have minimal legal and political power make them easier to exploit. Unlike adults, children would not complain about doing monotonous work (Garg, 1999:481).

Against the background of this understanding of child labour as a grave injustice to every child involved, and a grave shame on everyone enabling and abetting it, my two case studies of India and the DRC will not only be a factual overview of child labour in mining in these countries, but also an ethical fathoming of what goes wrong in these contexts, why, and what could be done about it. In this regard I will be guided by the questions mentioned in the following section.

### 1.3. Problem Statement

In their paper, Christian Barry and Gerhard Øverland (2011) ask: ‘How much for the child’ and the title alone is enough to cause chills down one’s spine, and this will further be elaborated upon in section 1.3. The thought of child labour still being a practice in today’s day and age automatically brings about disgust and dismay to the layperson and, with child labour still being practiced at such a large scale, the overarching research question that I would like to pose, is the following: *why* is child labour still happening and *what* can be done to strengthen measures against child labour? Against this background, the specific research questions that I will address in my case studies are: (i) What are the causes and effects of child labour; what enables child labour in mining, and how is it kept in place? (ii) What is being done in the context of the two case studies by various stakeholders to eradicate child labour in mining, and how effective are these efforts? (iii) How can measures to eradicate child labour in mining be improved?

The first and second of these sub-questions will be answered in part in each of my case studies, and I will make my own proposal in this regard in response to the third sub-question in the concluding chapter of this study, Chapter 5. In the literature review of Chapter 2, I will introduce my field of study in more depth and elaborate on the causes of child labour in the mining industry and describe how these causes relate to the existence of child mining, so as to address the first part of the overarching research question of this study. The first overarching question, which is the ‘meat’ of this thesis, will be focused largely on examining whether the current policies and measures are effective, and if they are adequate: that is, to interrogate why the measures are still not working. In order to properly address these questions, factors such as gaps in policies, room for improvement as well as the social, political, and economic factors

that contribute to the perpetuation of child labour will be considered. In sections 1.3.1 and 1.3.2 below I elaborate on this outline of my problem statement.

### 1.3.1. Are the current policies and measures in place adequate?

The working paper by Thévenon and Edmonds (2019) delves into the development of an effective anti-child labour policy – which means that they believe that the existing policies are ineffective. Thévenon and Edmonds (2019:48) contend that a multifaceted approach is needed to combat child labour. This is true – however they still emphasise having a legislative framework that “identifies reprehensible forms of work, pursues violators and effectively enforces penalties.” This raises questions such as: (a) Were the existing legislative frameworks and policies not doing this in the first place? (b) Why have international organisations continued to recommend them? (c) Was the international approach not one that centred around multi-stakeholder involvement – not only including state-owned enterprises (SOEs) and government, but non-governmental organisations (NGOs) as well?

Now that there are uncertainties around the effectiveness of the existing policies and frameworks, a review of the most effective measures and strategies by Thévenon and Edmonds (2019) can be analysed; and the primary factors identified are:

- Improvement of the knowledge base,
- Establishment of comprehensive child labour monitoring systems,
- Strengthening of social protection,
- Making education an appealing alternative to child labour,
- Improving financial literacy; and
- Addressing child labour at the workplace (Thévenon & Edmonds, 2019:48-65).

If it is found that the current measures and policies are adequate, then this raises the question: ‘Why are they not working?’ Edmonds’ approach (2007) that will be discussed in Section 2.4.2. which seeks to build on these factors.

### 1.3.2. Further questions about the efficacy of policies against child labour in mining

#### 1.3.2.1. What are the gaps in existing policy?

Raising awareness about the prevalence of child labour is integral to ensure that the abolition of child labour is sustainable and successful in the long-term. Reliable information systems are required at a regional level for accurate data capturing and control. International organisations

such as the ILO, UNICEF and the World Bank have been instrumental in offering standard definitions of child labour and providing data and trends over time, however, better data collection methods are required in poorer countries (Thévenon & Edmonds, 2019:48). A detailed look into the risks of child labour on children's mental and psychosocial development is needed and Thévenon and Edmonds (2019:48) suggest that this could be achieved by including indicators in child labour surveys that can measure the psychological damage of work on children. It is important to note that this was already suggested by the ILO in 2011 (ILO, 2011a), further evidence that there is a lag in implementing policies.

### **1.3.2.2. How can these measures be improved?**

Personnel in various sectors believe that combatting child labour is of utmost importance, but they highlight that overcoming such a systematic issue needs the cooperation from multiple stakeholders, government, and civil society (Boseley, 2018). The occurrence of child labour stems from a variety of issues that are social, economic and regulation related. This means that a collaborative solution is required. I believe this emphasises the need for a more *context-specific* approach to combating child labour and child mining. An additional concern for minors engaged in the labour force is the trafficking and commercial sexual exploitation of children. Issues highlighted in the quest to abolish child labour have been the fact that although governments are trying to execute good measures, there is a “lack of effectiveness of the states” says Sam Hynes, the head of indices at Maplecroft (Ahmed, 2019).

The backdrop of sub-section 1.2.2 reiterates the research sub-questions that guide the dimensions of my study and what I aim to address in Chapter 3 and 4 in my case studies, and they are as follows:

- 1) How does child labour look like in specific contexts?
- 2) What are the mechanisms enabling it in a specific context, how do they interact, and what are the effects of that on the lives of children?
- 3) Is the plight of children in labour taken seriously, by whom, how, and how do the different stakeholders in society, including communities, companies, NGOs, and the state respond?
- 4) How effective are current policies, if at all, and in which respects do they fail (and why)?
- 5) What are the gaps in current policies? And what can be done to improve upon them?

## 1.4. Methodology and Limitations

The rationale of this thesis is informed by my background in geology, hence the choice of seeking out the environmental injustices faced by the most vulnerable of the mining community – children. The increasing global dependence and supply of cobalt and mica mined by children motivated me to want to understand the normative principles that are supposed to govern the respective supply chains of mica and cobalt, and why there is a lack of branding of mica and cobalt products as “blood smartphones” or “bloody makeup.” Perhaps, this speaks to the lack of consumer awareness, and a lack of accountability from MNCs and the governments in charge of their respective mining sectors.

This thesis will be of the non-empirical kind where the overarching aim is a literature review. Non-empirical research refers to methods meant to review the progression of research in a particular field (Dan, 2017:2). Empirical research methods on the other hand, rely on the collection of data and the analysis thereof for effective qualitative research (Dan, 2017:2). Non-empirical research aims to understand the logic that underlies certain processes (Babbie, 2010:394), which is exactly what this study aims to do. To answer the research question, peer-reviewed articles and books will be consulted as well as journalistic works and reports from activist groups, because these will provide ‘field evidence’ on stories and case studies that are yet to be investigated by the academic community. The aim here will be to investigate literature that details the historical context of child labour in mining as well as to offer a glimpse into how literature relates this to modern-day slavery.

My approach to the research furthermore relies on the *phronetic* methodology as described by Flyvbjerg (2012). Flyvbjerg (2012:26) introduces the concept of a phronetic approach to social sciences and describes the phenomenon as the “contemporary interpretation of the Greek concept *phronesis*.” Phronetic research studies interactions of society and sociology by prioritising values and power and is based on a distinction of Aristotle between the three intellectual virtues, namely, *episteme*, *techne* and *phronesis* as Flyvbjerg (2012:26) states. Episteme addresses scientific knowledge and rationality, while *techne* approaches intellectual virtues based on technological knowledge (Flyvbjerg, 2012:26). Phronesis, on the other hand, refers to practical wisdom in which epistemic and technological knowledge are combined, elevated and surpassed in a practice of sense-making (or interpretation) guided by simple but

highly important value-rational questions:<sup>5</sup> Where are we going? Is it desirable? Who wins and who loses, by which mechanisms? What should be done?

The phronetic approach coupled with the theoretical frameworks offered by Kernohan (2012) and Nixon (2011) allowed me to understand that the existence of child mining is testament to a reduction of child miners and the environment to mere instruments, i.e., exploitable bodies in a wider utility and commodity network (a supply chain) geared towards the manufacturing of consumer goods, without raising the value issues flowing from this reduction. The literature review in Chapter 2 will further problematise further aspects of this reduction, for example the reliance of stakeholders on conventional knowledge systems (science and technology), and not focusing also on the global problem of exploiting not only nature, but also adults and children: through poverty and lack of access to resources and education.

Because *phronesis* approaches decision making by employing practical wisdom and value-rational questions to policy implementation, I believe that I am allowed to point out practices that are “morally repugnant” as Browne et al. (2004:14) describe child mining. Accordingly, in the discussions of my case studies I will use language and a tone that some may describe as “informal”, however, as Flyvbjerg and Kernohan suggest, child labour is “disturbing”, it is something that cannot be engaged with in a “pure”, “objective” approach; it rather calls for a value-laden response that cannot be articulated in abstract, theoretical language. Against this background, a large part of my thesis will focus on the apparent shortcomings in stakeholder responses to child labour, as the literature review will describe. This is done to problematise the lack of application of value rational questions in practice, and to strengthen the argument for context-specific approaches to ending child labour, as the frameworks in the case studies of India and the DRC will show. The historical and current failure of broadly applying value rational questions, and the concomitant effort to giving agency to the poor and powerless in society remain the running theme of this thesis, that carries the question *why* child labour continues to exist.

The industrial revolution in Britain and the overview of child labour in China (in the context of my literature review in Chapter 2) will be used to provide a historical context. To narrow down the scope of the study, two case studies will be conducted, one of child labour in the mining of mica in India, and one of child labour in the mining of cobalt in the DRC. In each of

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<sup>5</sup> Flyvbjerg distinguishes value-rationality from instrumental rationality. While the former focuses on sensemaking and determining what is good for humans (and the environment) in a certain context, instrumental rationality focuses on questions of utility and efficacy.

these case studies, given the methodological considerations sketched above, my focus will fall on:

- (i) The historical context of mining
- (ii) The introduction of children in mining
- (iii) Policy and legislative frameworks of each country
- (iv) The social, economic, and political aspects in their respective relations to mining communities
- (v) Intervention strategies and shortcomings in stakeholder response in the respective countries.

This research, however, is not without foreseeable limitations. Physical distance from India and the DRC, lack of funding, and obvious time constraints has led to me to opt for a desktop study approach, which explains my reliance on secondary data instead of primary field work. Also, I could not use South Africa as a case study because the mining sector of the country is not reliant on child miners.

## 1.5. Overview of Chapters

This thesis will comprise five chapters. Besides Chapter 1, which is the introduction, Chapter 2 will be devoted to a literature review, Chapter 3 and 4 will focus on the case studies, and finally, Chapter 5 will serve as the conclusion and offer some recommendations. The literature review of Chapter 2 will aim to introduce the key researchers and thoughts on the theme of child labour, emphasising the descriptive dimensions of child labour in mining. Further framework questions of this thesis will be elaborated upon once the shortfalls in existing literature have been identified. This chapter will also aim to address how mitigation of child labour has been conducted thus far and highlight reasons why legislature and international frameworks have been ineffective – if proven so.

Chapter 3 and 4 offer the thesis' case studies, with Chapter 3 devoted to child labour in India and Chapter 4 focusing on child labour in the Democratic Republic of Congo (DRC). The concluding chapter will aim to provide recommendations to the problem as identified in the introduction. The concluding remarks will make an appeal to the reader to take co-responsibility for child labour in mining, and will call upon governments and industries to act effectively against the grave injustice of child labour.



## **Chapter 2: Literature Review – with a Special Focus on the Problematic Dimensions of Child Labour from a Normative Perspective**

### **2.1. Introduction**

Child mining is a social and environmental problem but does not inherently resonate with society because it has been so far removed from our consciousness, and to a certain degree, has remained hidden and this follows the ethical frameworks supported by Kernohan (2012) and Flyvbjerg (2012). We can blame the bureaucratic red-tape, untraceable supply chains at the hands of corporations, consumer complacency or the fact that not enough attention has kept this socio-environmental problem out of sight. To address the problem of child mining, it is imperative to look at how things have operated thus far. To do so, this chapter will investigate the normative scope of child labour and focus specifically on the question what child mining actually entails, and why it is, ethically, highly problematic.

The most prevalent image that comes to mind when thinking about forced or exploitative labour is that of workers, sometimes underage, in sweaty clothing factories in some Asian country. Although this image is a grim one, the problem has been desensitised in society, similarly to child chimney sweepers in industrial revolution England, early in the 19<sup>th</sup> century. The unveiling of this denial and normalisation of injustice has increased levels to which corporations accept responsibility when applying adequate labour standards in their supply chains (LeBaron, 2014:238). With corporations failing to institute decisions and policies that encourage the move toward the adoption of labour standards in supply chains, this allows one to look further into what is currently being observed in industries that employ child labourers, specifically in mines.

There are numerous international regulatory and governing agencies dedicated to the eradication of child labour. These agencies pride themselves in having adequate legislature and conventions, but before looking into the current application, it is important to see what the existing literature contributes to the conversation. This chapter aims to interrogate the existing legislation and regulatory measures in child mining. This chapter will focus on the need for the current legislature, explore whether themes previously identified in the literature have been addressed in recent years; and will describe the process of application and implementation of conventions such as those promulgated with the help of the UN and the ILO.

The textile industry has been especially vocal on the injustices and exploitation faced by workers, hence the image of sweatshop workers in some small Asian country is not news to us. Consumers have gone to the extent of boycotting clothing labels due to the ill-treatment of workers, thus corporations have received increasing pressure to assume responsibility for the labour standards employed at all levels of production - a strategy needed in the child mining industry. However, for this to happen, there needs to be a transparent, effective, and accountable supply chain as is recommended for stakeholders. In the mining industry, the main stakeholders are the mining companies, miners, manufacturers, consumers, and states (Mutti, Yakovleva, Vasquez-Brust & Di Marco, 2012:216).

In summary, this chapter aims to highlight the normative scope of child mining, mitigation efforts and legislature. The existing models used to address the issue of child labour as well as supporting regulatory frameworks will be discussed. This will be done to highlight (i) the inadequacy of the *one-size-fits-all* model in response to child labour, (ii) the argument of making child miners part of the supply chain by empowering them through resources (advocacy and education) and giving them intrinsic value in practicality, and (iii) policy and legislative efforts aimed at eradicating the existence of child mining<sup>6</sup>. This chapter will also address the need for mining corporations to assume responsibility to treat workers fairly, contribute to social responsibility and cohesion by eradicating child work in the mining industry, and hopefully address the issues that stem from human rights violations that result. The conclusion of this chapter will focus on how ethics-centred approaches are best-suited to ensure sustainability, of the environment and that of the poor.

## 2.2. Normative dimensions of child labour

### 2.2.1. Overview of child mining

Child mining originates as early as the 18<sup>th</sup> century where children were employed to work the coal mines in Britain during the industrial revolution because they were small enough to crawl through smaller openings in the mines (Grootaert & Kanbur, 1995:195; Hindman and Smith 1999:26; Humphries, 2003:176). With the gradual technological advances that came with development, children were no longer needed as workers because they were soon replaced by quicker and more accurate machinery. Laws promulgated during the industrial revolution also deterred mine owners from employing children, the *Mining Act of 1842* is such an example

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<sup>6</sup> Listed separately for emphasis.

(Tuttle, 2001). The fact that laws were established as quickly as child labour was booming, shows that society has never been comfortable with the exploitation of children. However, something is amiss because centuries later, we are still confronted with the same problem in countries such as Zambia, Zimbabwe, Nigeria, Liberia, Sierra Leone, and the DRC (ILO, 2019b). Although geography has changed, the political, social, and economic motivators remain the same. The legislation of child miners is ineffective, however, and this is abundantly evident, as I will show in the rest of this chapter and in my case studies.

The main factors that have historically caused child mining and perpetuated the existence of child mining have been identified as the structure of the labour market, technology, poverty, education, and domestic socialisation and/or culture (Humphries, 2003:181-188; Grootaert & Kanbur, 1995:191-199; Hindman & Smith, 1999:25). To heed the warning given by Humphries (2003:180) it is important to not fall into the pattern of wanting to draw comparison between developed western countries that started off as industrialising economies and the currently developing economies in the global 'South.' Humphries (2003:180) warns that such parallels cannot easily be drawn because the realities are not so simple, and I agree. Therefore, I will illustrate in my argument and recommendations that universal *one-size-fits-all* approaches to child mining are not ideal – a more relative and *context-specific* approach to child mining and an application of morality, authority and legislature is more suited.

### 2.2.2. Causes of child mining and frameworks to address them

Field experts have proposed various ways of addressing the issue of child labour in a broad sense. This thesis addresses the specific issue of child mining, and not just general child labour therefore, the frameworks that will be evaluated and suggested, to tackle the broad issue of child labour, will be highlighted specifically and only in so far as they relate and function in child mining.

#### 2.2.2.1. Household structure and culture

Household structure and culture is one of the causes of child labour and child mining. When discussing how a parent would allow their children to be engaged in the labour market, there seems to be distinctions in the types of parents: altruistic versus selfish (Humphries, 2003:183). Altruistic parents act in the best interest of all family members, therefore, if the parents are too poor to provide basic necessities for survival, then having their children go to work is a necessary evil (Humphries, 2003:183). Selfish parents on the other hand, send their children to work because they want to reap the fruits of their children's labour while they are still alive

and well to enjoy the benefits. This means that there is no investment in the health, education and skills development of children and the children are just left overworked and exploited (Humphries, 2003:183) – not only by their parents but by society and the economy too.

The possible policy interventions that Humphries (2003:183) suggests include the banning of child labour, the institution of compulsory schooling and/or having education subsidies. She goes further to explain that when dealing with poor households, legislation is often difficult to enforce and even attempting to ensure enforcement puts the well-being of the child in jeopardy – even more so than exploitative labour. With the more selfish parents, policy intervention is more likely to be successful if intervention methods are incentivised: subsidised education is an example (Humphries, 2003:184). The approaches of dealing with different types of parents and parenting styles differ, which advocates and reinforces the need for case-specific intervention. Grootaert and Kanbur (1995:191) add that the family size of households in developing countries is typically larger, which means that there is a decreased likelihood that children will participate and progress in school. It also denotes that there is a smaller chance of parents being involved in their children's schooling.

#### **2.2.2.2. Labour market**

According to Humphries (2003:181) the development of a capitalist labour market was closely linked to the rise of technology in industries. The advancement of technology meant that women and children could be employed because the strength and skill that was initially required from men could be compensated for by technology (Humphries, 2003:181). An example of this is steam power and machinery in the mining (coal) industry during the British industrial revolution. With time, as government regulations were slowly becoming the norm, manufacturers advocated for the necessity to keep labour costs low for international competitiveness and advocated for the continued use of child labourers to a certain extent (Humphries, 2003:183). Employers, on the other hand, had the market power and affected the economy; and in their pursuit of keeping production costs minimal, had child labourers because it worked in their favour. This was done by substituting adult workers with child workers because children could be easily exploited. In turn, the wages of adult workers were suppressed because child workers worked for less (Humphries, 2003:183). A vicious cycle was subsequently triggered: because adults had decreased wages, the household income was insufficient for survival, so children were roped into the labour force to supplement the household income, but the employment of children kept the adult wages low (Humphries, 2003: 183; Grootaert & Kanbur, 1995:194). Here, we see the intersection of the labour market and

household economy. This phenomenon is best described by Basu and Van (1998), as quoted by Edmonds (2007). Basu and Van pointed out the fact that adult and child workers are often employed as alternates in the production cycle in what is known as the *substitution axiom*. With the existence of this phenomenon, child labour often suppressed the wages of adult workers (Edmonds, 2007:35) because children were willing to work for less.

The reason why children are willing to accept lower wages is because children often go into the labour market to gain an income that will supplement that of their households when money brought in by the adults is insufficient for the sustenance of the household (Edmonds, 2007:35). It is only when children enter the job market in order to assist their households, that Basu and Van (1998) call this the *luxury axiom*. The cycle then becomes more complicated as Basu and Van propose that when children enter the job market to contribute to their households, they then suppress the wages of the adult workers to the extent that child labour needs to continue so that children are then able to get an income (Edmonds, 2007:35). Grootaert and Kanbur (1995:194) claim that if there are effective minimum wages for adults this could discourage the employment of children.

### **2.2.2.3. Technology**

The development of technology during the industrial revolution was necessary and so was the use of child labour. This is because of some early machinery being designed to be specifically used by children to effectively reduce labour costs (Humphries, 2003:181). Humphries (2003:182) goes further to add that the labour children engaged in was usually a consequence of failed or incomplete mechanisation; meaning that the expansion of child miners in the coal sector resulted from labour outputs still increasing despite improvements and changes to the transport technology. This statement applies mainly to the fact that children often needed to drag coal from the narrow underground passages to the surface (Humphries, 2003:181; Grootaert & Kanbur, 1995:195).

With the development of not only the mining sector, but technology in general, child miners were no longer required. While this is good, there was a ripple effect created by children not having access to schools, falling behind with their fellow peers as well as being used to having steady wages and being able to assist with the household income (Edmonds, 2007:59). What is being brought to the fore is the fact that legislation and technological advancement clearly did not remove or solve the factors that led to children resorting to working. These very same

factors are what have led to the perpetuation of child labour and child mining in the present-day.

#### **2.2.2.4. Role of the State**

The state or governments played a role in the boom of child labour in Britain because of both action and inaction. When instituting policies, certain policies brought about unintended consequences. An example being that labour and child labour legislations weakened labour organisations and led to the terrible treatment of women and children. Operation of Poor Relief, for example, led to families with more children being subsidised only if some of them were put into work as pauper apprentices (Humphries, 2003:188). There was also a general consensus among economic historians that for Britain to be a pioneer of industrial revolution, the “well-being of several generations of children was sacrificed to make Great Britain wealthy” (Hindman & Smith, 1999:26). The British government did attempt to monitor and regulate the occurrences of child labour and other industrialism-related abuses by promulgating the *Factory Act of 1833* (Hindman & Smith, 1999:26). Similarly, to Britain, the United States followed similar patterns of employing children during industrialisation, and also had their period of “public condemnation” which was addressed via the National Child Labour Committee that was established in 1904 (Hindman & Smith, 1999:26).

It is important to note that the long-reaching hand of industrialisation stretched out to colonies of Britain in Africa – South Africa and Zimbabwe being examples (Grier, 1994:30). From 1898 white-owned mining companies in Zimbabwe would occasionally advertise wage rates for young boys from eight years and above (Grier, 1994:27). Boys from eight to ten years old would work on the surface, and boys older than ten years worked as domestic servants in the mining compounds owned by the mines (Grier, 1994:27). The girls on the other hand worked as domestic servants in the homes of white people living in the urban areas (Grier, 1994:27). An important point of departure that Grier (1994:29) emphasises is the fact that, come the 1920s, there was a strong relationship between child labour and the accumulation of wealth in colonial Zimbabwe. This is because of the “paid and unpaid” labour of the Black children working in the mines of Southern Rhodesia, under the British South Africa Company rule, together with the adult workers, led to the economic growth of the British colony (Grier, 1994:27,40). This relationship was further solidified by the establishment of a legal regulatory mechanism to continue the control over Black children, and the promulgation of the *Natives Juveniles Employment Act of 1926* is one example (Grier, 1994:29). This act goes further to state that: “children are always regarded by the natives as an asset instead of a liability” and

that “natives have always utilised the services of their children,” therefore, the colonial rule used cultural socialisations of the Shona and Ndebele communities as a way to justify the ill-treatment and exploitation of young Black children (Grier, 1994:30).

The use of household and cultural dynamics as means of justifying the exploitation of the most vulnerable in society is a theme that colonisers and white imperialists seem to rely on, and the following section will confirm this.

## 2.3. Current lessons from China

The above stated causes of child labour and child mining offer the historical pattern. However, in her study Nguyen (2017) evaluates the causes of child labour in China with a more current lens. Before detailing the causes, she also gives a nod to geographic setting and the type of employment sector as complementing factors. In terms of geography, work done in a rural and/or remote setting can more easily be concealed and forgotten. An example would be a child in a rural village working on a family farm – because of the cultural bond and tradition that values children doing work for family, the child can be exploited in plain sight (Nguyen, 2017:242). In terms of the type of employment sector, different industries attract different people, so a mine that is part of a global corporation will expose children to more hazardous work. However, due to international scrutiny, there is increased pressure for corporations to adhere to conventions and legislation so there would then be a smaller percentage of child miners, as research has shown (Nguyen, 2017:242). The take-home from this, as Nguyen (2017:251) so clearly states is: the causes of child labour cannot be confined to the existing Chinese legal framework alone: globalisation, limited education, and the socio-cultural constructs of definitions of a ‘child’ and ‘childhood’ all play a major role.

### 2.3.1. Causes of child labour in China

#### 2.3.1.1. Ratification on international treaties and conventions

Chinese law and foreign affairs policy make provisions for the implementation of international obligations and China has ratified major documents and policies such as the Convention of the Rights of the Child and ILO Conventions No. 138 and No. 182 (Nguyen, 2017: 243). However, the Chinese constitution is not explicit about the hierarchy of international treaties in the domestic legal system, which means there is a disconnect in views when it comes to the legal effect of international treaties (Nguyen, 2017: 243)

### **2.3.1.2. Globalisation and rapid economic growth**

Nguyen (2017:244) contends that globalisation has perpetuated and increased the cycle of poverty (Schor, 2005:318) and has caused children to become more susceptible to exploitation. Countries are roped into global markets because foreign investment have been known to create economic opportunities, increase the quality of people's lives, and reduce poverty. The rapid economic growth that is encouraged by globalisation has made it easier for corporations to outsource labour for cheap (Nguyen, 2017:245; Schor, 2005:318). However, it has only perpetuated global poverty and increased the exploitation of workers, women, and children especially (Nguyen, 2017:244; Bhatta, 1998:384). The other issue with globalisation is the fact that free trade agreements have been developed in a way that gives global corporations the ability to bypass and neglect environmental protection, workplace health and safety regulation and child labour laws (Nguyen, 2017:251; Schor, 2005:316).

### **2.3.1.3. Limited education**

In the western and inland regions of China which are primarily located in rural communities, schools receive limited financial support from the government which results in a lack of or limited educational resources, underqualified educators, and poor school infrastructure (Nguyen, 2017:247). These issues all contribute to high numbers of children leaving school. There are limited alternatives aside from seeking work in order for these children to survive (Nguyen, 2017: 247).

### **2.3.1.4. Social and cultural constructs of 'child' and 'childhood'**

Different cultures and societies classify children and childhood in various ways. In certain cultures, an individual may be considered a child and in others, an adult. This means that children are then assigned different responsibilities and obligations because they are expected to fulfil adult roles (Nguyen, 2017: 247).

## **2.3.1. Results of child labour in China**

### **2.3.2.1. Child**

It has been well-documented, and it is well-known that the effects of child labour are felt most by the child, this includes the long-term physical, mental and emotional detriments (Nguyen, 2017:248). Children engaged in the agriculture and industrial sectors are most exposed to physical injury and dangerous working conditions (Nguyen, 2017:248). When it comes to the emotional and mental welfare of a working child, employers easily abuse their child workers by means of emotional abuse (Bhatta, 1998:384), and when coupled with general work stress



and the pressure that the children can face from home, the social development of the child is hindered and impacted (Nguyen, 2017:248). Hampered social development and limited educational development means that the children do not develop as they ought to and they have limited interactive and cognitive skills to lead a healthy life (Nguyen, 2017:248).

### **2.3.2.2. Economy**

Child labour is attractive to foreign markets because the labour yielded is cheap and such low-cost labour can potentially suppress the wages of adult workers and thus perpetuate the cycle of children needing to continue to work and substitute for adults – for their parents, essentially (Nguyen, 2017:249). Child labour, however, affects economies negatively and as seen in the case of China, it has led to unstable economic growth which results in poverty which in turn perpetuates the existence of child labour (Nguyen, 2017:249; Schor, 2005:318).

### **2.3.2.3. Employer**

Domestic Chinese law has negative ramifications for employers who engage in child labour. In addition to this, persons in charge of hiring child workers can also be given an administrative punishment which includes a demotion, dismissal, or disciplinary hearing (Nguyen, 2017:250). However, even with all these legal stipulations and penalties, China experiences major challenges in monitoring employers as well as enforcing such legislation as highlighted by Nguyen (2017:250). A disadvantage to law enforcement is that it can often be overlooked or even weakened for the sake of attracting foreign capital and investment because foreign investors want to spend the least amount of money when it comes to production costs, and the existence of child labour allows just that (Nguyen, 2017:250; Schor, 2005:318). The major fear of global enterprises is the legal consequences and condemnation from the international community because customers are very reluctant to support corporations that employ exploitative labour and global corporations cannot afford to lose those profits (Nguyen, 2017:250). To amplify this point, Schor (2005:312) urges “those who are committed to reconstructing the global ecology” to continue to be critical of the operations of businesses in the global economy, employers included. With such attitudes and conduct, Bhatta (1998:384) argues that there is simply no economic justification for child labour, since most of the arguments made are “either invalid or at best weak.”

## 2.4. The ethics of it all

### 2.4.1. Business ethics

In the business sector ‘the customer is always right’ which is why the consumer is most relied upon to be most vocal about the moral problem of exploitative labour, especially when children are involved. However, the issue with solely relying on public and consumer outcry is that consumers have limited knowledge of the manufacturing of products and the conditions under which workers are employed (Hindman & Smith, 1999:29). Information outlets for consumers are the media and the companies that produce the products, and if those stakeholders are not transparent about their operations, not much can be done by consumers (Hindman & Smith, 1999:29). Accordingly, many may argue that it is the responsibility of businesses to take initiative when it comes to addressing child mining, however, the method and extent of Corporate Social Responsibility (CSR) rests ultimately on businesses themselves. It is up to the businesses to act responsibly, the argument goes, but this raises the question whether business in this role is not in fact looking like a wolf in sheep’s clothes.

With this perspective in mind, I will show in my two case studies to what extent the business sector lives up to the requirement of taking responsibility for child labour in their supply chains reliant on mining. I will also endeavour to establish why this is the case, and what is, or can be done about it in these contexts where businesses prove not to be able to live up to the growing expectations the world have about their corporate social responsibilities.

#### 2.4.1.1. Cultural relativism vs universal human rights

According to Hindman and Smith (1999:30), those who describe themselves as ethical relativists are most likely to give agency to local cultural, social, religious, political, and economic difference when making moral decisions. This of course does not absolve such thinkers from scrutiny just because such an approach is not deemed ‘morally imperialist’. They too can be guilty of endorsing indigenous practices that are frowned upon because of the normalisation of western cultural norms (Hindman & Smith, 1999:30). Moral imperialists, on the other hand, tend to extend the same moral principles universally and seek to have them align with western ideologies (Hindman & Smith, 1999:30). From this point of view, the argument goes, global solutions and truths need to be considered in order to solve a global problem. This, however, is argued in this study, that it should always be done from a particular context – taking concrete stakeholders and the dynamics of their interactions into account. If not, universal truths become nothing but imperialist ideologies.

#### 2.4.1.2. Global / local logical clash

The same general point applies when the logical clash between the global and the local is considered. Hindman and Smith (1999:30) points out that the now developed world was founded on capitalistic notions which fuelled the political economy of the west. However, the push toward global culture and mass consumerism have brought us here because the developing world is now functioning under the paradigm of industrial capitalism. Local markets and developing countries have thus been pressured towards upholding systems and structures of global markets that stand starkly in contrast to local practices that have had centuries to develop. This, however, is not only a major inconvenience, a clash of culture and principles, but also perpetuates the mistakes of our forebearers. Ultimately, Hindman and Smith (1999:30) argues, this convergence of economies and repetition of patterns of development just leads to economies resembling each other. In my two case studies on India and the DRC respectively, I will return to this point.

Humphries (2003:192) is a strong proponent for organisations, families, labour markets, and governments making customised interventions and policies to suit scenarios in order to help eradicate the problem of child mining and child labour as a whole. She also does acknowledge the difficulties in tracking, documenting, and measuring child labour especially in sectors that have been forced into 'hiding' due to awareness and public outcry. For policies to be effective, she argues, there needs to be a deep understanding of the institutional framework of the labour market, improved family strategies when the issue of gender roles comes into play; and finally, evolved relations between employers, manufacturers, workers, and the state need to be considered in order to determine the specifics of responses (Humphries, 2003:192).

Advocates who acknowledge poverty as a factor in the perpetuation of child labour seek the enforcement of child workers' rights and programmes of empowerment within the work force (Roy, 1998:26). Programmes of empowerment and poverty mitigation include fair wage, adequate working conditions, and skills development (Roy, 1998:26). On the aspect of a lack of education contributing to child labour, the schooling system can be critiqued with regards to its contribution to child labour. Issues include ill-equipped schools, inadequate teaching skills, impractical schooling hours and corporal punishment (Roy, 1998:26). Solutions to improving the education system and indirectly ending child labour include making primary school education compulsory for everyone and reforming the systems so that learning is appealing to children (Roy, 1998:26). Roy (1998:26) proceeds to comment about poverty and education

being considered as factors to combatting child labour, and reasons that the possible ‘solutions’ listed do not aim to dismantle the existing systems, but only aim to make the system ‘better’ and more ‘humane.’ This creates an ethical problem that I will discuss in more detail in the context on my two case studies. In India, the Child Labour (Prohibition and Regulation) Act of 1986 prohibits children younger than 14 from working in mines (O’Driscoll, 2017:5), and Article 23 of the DRC’s Mining Code of 2002 prohibits such work for children younger than 18 (Amnesty International, 2016:37).

This already is a clear indication that it is in all probability not a good idea to follow a one-size-fits all approach to the problem of child labour. Different countries and regions have different contexts and histories, and all of these differences need to be considered. Additionally, it is important to notice that individual countries have made different policy choices (where they indeed formulated policies) to address the problem of child labour within their jurisdiction. It is not the place, however, to give an overview of all these differences here in the introduction, it will require a full study on its own just for this. Suffice to mention, though, that in my two case studies of India and the DRC, I will point to the different ways in which child labour, specifically in mining, is approached (or not) in these respective countries.

From another angle, Hindman and Smith (1999:23) have abundantly highlighted the inefficiency of child labour as a source of economic production, as well as the complexities of eliminating child labour completely and abruptly. The four main considerations in this regard have been listed by Hindman and Smith (1999:23) as follows:

- The approach of forcibly ejecting children from the labour sector as the “all or nothing” current international policies and conventions suggests, directly affects the family because there is a direct loss of the child’s income. Instead of gradually phasing child labour out, through incentives and alternative employment, international policies tend to just prohibit child labour, without family dynamics and economics of these affected communities having been investigated and assessed.
- Secondly, eliminating child labour only makes more employment possible for adults, indirectly targeting adult unemployment and poverty.
- The hazardous environment children are exposed to physically harms them because they grow up stunted, malnourished and even abused. This in turn implies that by the time these child labourers reach adulthood, they are unable to contribute to the

workforce, thus leading to a decreased working class in the future and only perpetuates the cycle of poverty.

- Lastly, when children are drawn into the industrial sector and neglect schooling, the future development of human capital skills is undercut, subsequently leading to an undereducated working class.

Developed nations that have industrialised and advanced globally have been known to typically argue for a universal (western) application of standards when condemning and abolishing child mining, however, a major problem with such an imperialist, western approach is the self-righteousness and moral superiority with which standards are upheld; and these often do more damage than intended (Hindman and Smith, 1999:29). This illustrates why the phenomenon of global child mining and exploitation persists, because the problem is not understood in context, and therefore, not appropriately and effectively dealt with. This deduction can be made based on the above-listed reasons. Accordingly, Hindman and Smith (1999) look to explore business ethics for pointers to solutions, considering the tensions between cultural relativism versus universal human rights, and the global/local interchange of systems. As such, this aligns with my suggestion of a *context-based* approach to child mining, as opposed to the traditional *one-size-fits-all* approach that developed countries have. In contrast to the business-ethics approach, I will also discuss the policy approach of Edmonds below.

#### 2.4.2. Framing Edmonds and his approach to policy dimensions in child labour

According to Edmonds (2007) the policy considerations that are aimed at targeting child labour fall into 6 categories: information campaigns, income replacement programs, flexible schooling programs, reintegration projects, restrictions on employment, and conditional cash transfers (Edmonds, 2007:63). The review of literature conducted by Edmonds (2007:63) showed that only two categories have extensive academic literature – legislative restrictions on employment and conditional cash transfers. Edmonds (2007:63-69) goes further to explain the policies that were not as detailed in the literature, namely: child labour specific programs, restrictions and prohibitions on employment, trade sanctions and labour standards and conditional cash transfers. Below I will provide a brief overview of Edmond's view of these four themes.

##### 2.4.2.1. Child Labour Specific Programs

Child labour specific programs encompass information or awareness campaigns, income replacement programs and flexible schooling programs. Awareness campaigns have been

established by various organisations, including the ILO where they aim to educate parents, employers, and children about the negative effects of child labour. The main message of these campaigns is that children should not be engaged in hazardous work and should rather be in school (Edmonds, 2007:63). The method of spreading the information varies largely but covers the popular media types such as radio or TV programs, news reports and even billboards (Edmonds, 2007:63). Another method of delivering the informational message has been employing community leaders to mobilise and work in conjunction with local activists to ensure that the information reaches children and other related individuals. In this regard the important point to grasp, though, is that the motivation behind having awareness campaigns comes from the assumption and belief that “parents do not know what is best for their children,” as stated by Edmonds (2007:63). I strongly oppose this view because it is informed by the trope that has become normalised in activist movements, where the west imposes their universalist morals onto developing nations.

In this context, besides information or awareness campaigns, Edmonds also touches on income replacement programs, making use of the same assumptions as mentioned above. In income replacement programs, the income a child would have generated through work is compensated to their families, often as an incentive for keeping the child in school. The assumption is that the reason that parents decide to put their children in work is to supplement the household income, therefore, if the income is compensated, the child should be able to remain in school and the parents are no longer forced to send their children to work (Edmonds, 2007:63). Some income replacement programs, however, come with ideologically motivated conditions for receiving a grant, but this will be discussed in detail in sub-section 2.4.2.4. below (Conditional cash transfers).

Flexible schooling programs, however, function on the premise that children should be able to work, but also attend school. These programs do not influence whether a child engages in work or not, but the programs do aim to ensure that schooling and work are compatible for children who choose to do both (Edmonds, 2007:64). This is achieved by having modified school hours to accommodate pupils' work timetables and having the academic calendar adjusted to local working conditions and demands.

It is important to highlight the observation by Edmonds (2007:64) that although these policies are universal, the scientific evaluation of them is not. This is attributed to the fact that there is limited evidence on the effectiveness of policy interventions (Dammbert, De Hoop, Mvukiyehe

& Rosati, 2017:23); and this lack of policy research constricts the potential to design and improve existing policies (Edmonds, 2007:64). I would also like to contend that the application may not apply in all contexts of child labour, globally – not even in a singular sector, like the mining industry. This is because as the case studies in chapters 3 and 4 will illustrate, the context matters.

#### **2.4.2.2. Restrictions and prohibitions on employment**

According to Edmonds (2007:65), it is often industries or states that have the power to implement targeted activities that aid in prohibiting the employment of children. These programs identify and remove child labourers from the activities they are engaged in globally. An example of such a program is the ILO Convention C138 on the minimum age of employment which has been approved by 141 countries (Edmonds, 2007:65). It is alarming to note, however, that despite this rigorous effort in terms of policy adoption that there has not been a study into the effectiveness of these policies because it is often the case that the prohibitions are merely passed without the intention of enforcing them (Edmonds, 2007:65). There is proof, though, that enforcement of prohibitions on child labour can be effective, as seen in the Basu and Van model of 1998.

The model depicts the conditions under which enforced prohibitions on child labour may improve the welfare of the children. The Basu and Van model (BV) provides numerous equilibriums where it shows the role of policy in child labour elimination (Edmonds, 2007:65), as shown in Figure 2 below. In the example illustrated in Figure 2 E1 and E2 are the equilibriums and in E2, children are employed to work, which in turn causes the wages to decrease, creating conditions where children need to work (Edmonds, 2007:65). The presence of the equilibrium E1 allows for the policy to have an effect on the child labour supply, meaning that if policy has enough time to function, then the equilibrium in the economy can move to E1 (Edmonds, 2007:65). The analysis of the model further shows that should there be a move to E1, children will be prevented from working thus eliminating the CD and BC segments. This means that market wages increase and households needing to go into work no longer need to (Edmonds, 2007:65). However, Edmonds (2007:65) also adds that the existence of multiple equilibria does not suffice as condition for policy targeting child labour. In addition to this, there is no available evidence from low income (developing) countries on the effectiveness of general bans on the employment of children (Edmonds, 2007:65). This is important to this study because it nods to the fact that the existing policies are not effective in developing countries.

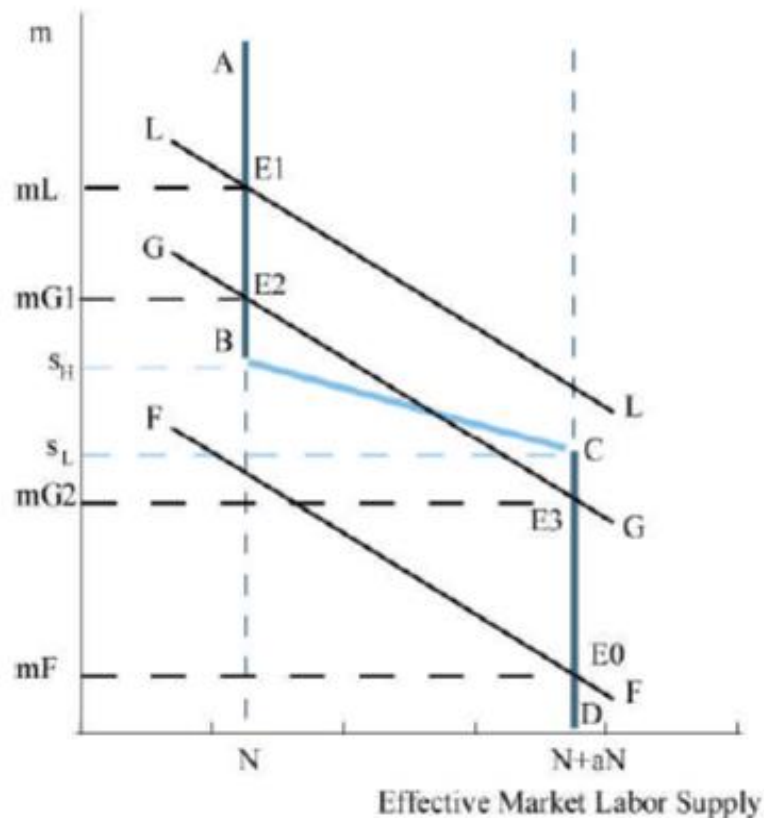


Figure 2 - Basu and Van Model of the labour demand and the Potential for Policy Interventions

Source: Edmonds, 2007:91.

#### 2.4.2.3. Trade sanctions and labour standards

The prevalence of child labour in developing countries has gained enough recognition to incite disapproval in developed countries, calling for coordinated labour standards, trade sanctions against countries with high figures of child labour, and consumer boycotts on products made by child workers (Edmonds, 2007:67). Suggestions on how these policies would operate have included having the World Trade Organisation (WTO) or the ILO monitor the compliance of countries with the standards, punishing countries that violate them by means of trade sanctions (Edmonds, 2007:67). Proof of the effectiveness of consumer boycotts can be seen in the boycott of FIFA and their use of soccer balls produced by Pakistani child workers, where the threat of a boycott convinced the manufacturers to participate in a monitoring program offered by the ILO (ILRF, 1999). The International Labor Rights Fund or ILRF (1999) made recommendations to the ILO because they did not find the program designed by the ILO in which the soccer ball manufacturers were participating effective.



Edmonds (2007:68) also highlights the negative side of product boycotts by referencing works by Basu and Zarghamee (2005), and Brown (2006). Basu and Zarghamee (2005) argue that product boycotts by consumers only focus on the labour supply by children, as opposed to the demand. This means that product boycotts only depress the wages paid to children if wages are set locally (Edmonds, 2007:68). When establishing the theoretical evidence, Basu and Zarghamee (2005:13) found that in the following two conditions, consumer boycotts are ineffective: firstly, if the supply curve for child labour is downward sloping, and secondly, when the demand for child labour is elastic.

The take-home-message from the study conducted by Basu and Zarghamee (2005:13) is that quantitative evidence is needed to test this economic theory across various situations and countries. In addition to this, Edmonds (2007:68) states that it is unclear what type of policies sanctions, threats and boycotts are trying to affect. The motives of passing such policies are blurred because no one is certain whether these policies are meant to protect the wellbeing of children from poor countries or whether they are forms of what Edmonds refers to as “hidden protectionism.” Hidden protectionism is described as government policies that are implemented because they subtly restrict international trade in order to benefit local industries and/or people (Walters, 2021).

#### **2.4.2.4. Conditional Cash Transfers**

To curb child labour and increase schooling, numerous countries have established policies such as educational subsidies to decrease the cost of schooling (Edmonds, 2007:69). The fact that such policies indirectly discourage child labour by directing agency to other issues such as schooling is an advantage. Although such policies and incentives may seem small (an example is the Bangladeshi Food for Education program that pays children in monthly rations of rice for attending school), the impact of conditional cash transfers seems to be the most optimal tool for tackling child labour without formal justification as viewed by Edmonds (2007:69). What is meant by *formal justifications* is that these conditional cash transfer policies do not need to follow the mandate of child labour related interventions such as child labour bans and obligatory schooling laws (Edmonds, 2007:69). This means that conditional cash transfers are apparently the most effective tool for the eradication of child labour that does not rely on formal policy and legislature.

An opposing argument to this has been made that such schooling incentives operate on the assumption that the quality of schooling is already advantageous to the conditions of children,

relative to that of the working sector (Edmonds, 2007:69). This was also substantiated by Jafarey and Lahiri (2005) that improving the quality of education would be more effective than (un)conditional cash or in-kind transfers within functioning credit markets, as cited by Edmonds (2007:69).

The conclusion reached by Jafarey and Lahiri (2005:417) when they examined two policies: *food for education* and *improvements in education quality*, was that an increase in funding for the betterment of school quality was more effective than decreasing child labour as a source of income for poor families. Although having a policy that subsidises food for education does lead to a decline in child labour, the availability of income has an influence on the effectiveness of the policy (Jafarey & Lahiri, 2005:417). This means that ideally, there should not be a market that favours child labour for the incidences of child labour to decrease, and there needs to be financial injection (often in the form of foreign aid) to improve the quality of education. An optimal combination of both policy tools would be most effective for conditional cash transfers (Jafarey & Lahiri, 2005:418).

Although more recent studies<sup>7</sup> are starting to increase in understanding the reasons behind child labour and the consequences of subsequent work, the links of child labour to poverty are yet to adequately be documented and researched. An important concluding remark made by Edmonds (2007:70) is that the least researched component of child labour are the decision makers, and the question whose “marginal utility” matters ultimately. This then makes one question the concept of authority and custodianship, and why intrinsic authority is given to international and often rich, western powers i.e., the World Bank, UNICEF,<sup>8</sup> and the ILO to define problems and identify policy responses with regards to child labour. Why are local communities, activists and actual child workers not considered to be stakeholders too in matters that directly affect them? The household structure (family dynamic and parenting structures) is also a major factor in the existence and perpetuation of child mining; therefore, parental voices are highly important in the abolishment of child labour. Accordingly, in my case studies, I will not only focus on global and states’ policy responses to child labour in mining, but also highlight the responses of crucial local actors such as: communities, households, parents, and the children involved themselves.

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<sup>7</sup> Nguyen’s work (2017) is such an example, and the so are the case studies in chapter 3 and 4.

<sup>8</sup> United Nations Children’s Fund

Now that the overview of child labour has been provided in broad scope, together with possible responses to it from a business ethics and policy point of view, international frameworks that have governed the child mining sphere need to be described, analysed, and applied as they relate to the scope of this thesis. This will be done by a discussion of the ILO and UN as the leading authorities on child labour and mining occupation rights.

## 2.5. What about the kids? Who fights for them?

The International Labour Organization (ILO) was established by the UN to be an agency that sets and maintains labour and social standards using conventions that are legally binding as a vehicle (Nguyen, 2017:241). Since its inception, the ILO has been responsible for reporting the figures of child workers engaged in exploitative work. The issue of the reported figures is that they are often underreported, because the statistics the ILO maintains do not cover employed children under the age of 12 years old (Garg, 1999:475). Another issue is the fact that the documenting of child labour lacks adequate documenting procedures (Garg, 1999:475).

The ILO was created in 1919 by the Treaty of Versailles, as stated by Garg (1999:493) and its purpose was to abolish child labour, limit the labour young adults and children are involved in, and to ensure the proper physical development of youths who are engaged in work (Garg, 1999:493). The ILO was also established in order to delineate the rights of workers using conventions ratified by member nations in order to provide procedures through which workers' rights can be achieved (Garg, 1999:493; Browne et al., 2004:4). In countries where member countries fail, the ILO is responsible for the distribution of aid in order to implement the standards set up by the agency (Garg, 1999:493). There are 175 member countries and over 176 labour standards and conventions were adopted since 1919 by the ILO (Garg, 1999:496).

In 1973, the ILO adopted the Minimum Age Convention (No. 138) to ensure that countries are bound by a national policy that is aimed at the effective abolishment of child labour, and it has been ratified in 135 countries (Thévenon & Edmonds, 2019:15). This convention also specifies the minimum age for labour as 15 years, however, a relaxation of this minimum age has been seen where children are engaged in light work and the minimum age can range from thirteen to fifteen (Thévenon & Edmonds, 2019:15; Nguyen, 2017:240; Garg, 1999:496). Light work refers to any work that does not harm children's health or schooling (Thévenon & Edmonds, 2019:15).

In 1990, however, the United Nations made the decision to adopt the Convention on the Rights of the Child and the convention was ratified by 193 countries (Thévenon & Edmonds, 2019:15; Nguyen, 2017:240; Garg, 1999:496). The only countries that did not ratify the Convention were the United States and Somalia (Garg, 1999:496). What is most important about this convention is Article 32 of the document which upholds the right of children to be protected from exploitation (that is often economic driven), and from engaging in work that is hazardous and can possibly interfere with the education of children, or hamper their health, and development that is physical, mental, spiritual, moral and/or social (Thévenon and Edmonds, 2019:15; Garg, 1999:496). The problem with the Convention on the Rights of the Child is that it lacks enforcement mechanisms – this Convention and the institutions that are meant to regulate the implementation of conventions rely mainly on monitoring, reporting, publicity, and moral persuasion – mechanisms that are inadequate when it comes to preventing violations (Garg, 1999:496).

A few years later, in 1992, the UN established the International Program on the Elimination of Child Labour (IPEC) which was aimed at “progressively” eliminating child labour by improving national facilities as a way of confronting some of the causes of child labour, with universal access to primary school education being the main goal (Thévenon & Edmonds, 2019:15; Garg, 1999:496). The overarching goals of the IPEC are as follows:

- Combating child labour by developing support services,
- Aiding in the process of ejecting children from work in specific villages,
- Providing alternative sources of income for children and their poor families, and
- Changing the attitudes that communities have towards child labour (Garg, 1999:496).

Like the Convention on the Rights of the Child, the IPEC also lacks enforcement mechanisms (Garg, 1999:496). This then begs the question: why were three different conventions on child labour ineffective, increasing the need for added conventions when the mandates that drives them (abolishment of child labour) as well as the target audience remained the same? Hopefully, this question will be answered by subsequent conventions, and to some extent, my case studies.

In 1995 the ILO estimated that 73 million children with ages ranging from 10 to 14 participated in child labour in 100 countries (Hindman & Smith, 1999:21). Approximately 120 million children aged 5 to 14 were found to be fully at work in 1996 (Garg, 1999:475; Hindman & Smith, 1999:21). The ILO then formulated the Worst Forms of Child Labour Convention

(C182) in 1999 which prohibits the worst forms of child labour, defined as: “All forms of slavery and slavery-like practices, such as child trafficking, debt bondage, and forced labour, including forced recruitment of children into armed conflict.” The following is also prohibited: “the use of a child for prostitution or the production of pornography, child labour in illicit activities such as drug production and trafficking, and hazardous work which is likely to harm the health, safety or morals of children” (Thévenon & Edmonds, 2019:15; ILO, 1992).

The ILO subsequently decided to develop the Worst Forms of Child Labour Convention (C182) in 1999 and the convention was ratified by 151 countries. Convention no. 182 prohibits the worst forms of child labour (Nguyen, 2017:240) which have been identified as follows:

- All types of slavery and slavery-adjacent practices including child trafficking, debt bondage, and forced labour.
- Use of children in sex work (prostitution) or pornography, in illegal activities such as drug production and trafficking and in hazardous work (Thévenon & Edmonds, 2019:15).

The convention also states that specific types of employment and what constitutes hazardous work are to be determined by the respective national laws and legislation, or competent authorities when there is a failure in prohibiting and eliminating the worst forms of child labour (Thévenon & Edmonds, 2019:15; Nguyen, 2017:241). The joint ratification of Convention No. 138 and No. 182 in individual countries means that these states pledge to allow no work being conducted by people under 18 years of age in all sectors, as summed up by Thévenon and Edmonds (2019:15).

Additionally, the Universal Declaration of Human Rights was adopted to ensure the protection of fundamental rights and freedoms of all human beings (Nguyen, 2017:240). The document states that children are entitled to “special care and assistance, the right to education; right to be free from exploitation and slavery,” as stated by Nguyen (2017:240). Child mining and its associated conditions is a clear violation of the rights of the child. The issue of this document, however, is that as it is, it just makes moral claims without legally binding powers to enforce the protection of the rights of those it seeks to advocate for (Nguyen, 2017:240). This makes the Universal Declaration of Human Rights different to the UN Convention on the Rights of the Child because unlike the Declaration, countries in which the Convention on the Rights of the Child is ratified are legally bound to the stipulations of the document (Nguyen, 2017:240).

It should also be noted that the UN has earmarked the 2nd of December as the International Day for the Abolition of Slavery, because contrary to popular belief, there are still victims of modern-day slavery (UN, nd.). Modern slavery encompasses forced labour, debt bondage, forced marriage and human trafficking – where to the core, people are exploited and there is violence, threats, and abuse of power (UN, nd). Figures from the International Labour Organization (ILO) reported that in 2016, approximately 40.3 million people were in modern slavery, at any given time. In addition to this, they reported that 1 in 4 victims of modern slavery are children and that women and girls are disproportionately affected by forced labour (ILO, 2017b).

What can be extrapolated from Edmonds (2007) and the history of multilateral organisations (ILO and the UN), is the perpetuation of child mining and child labour in general despite Declarations, international Conventions, and national legislation. This only begs the questions: why, what is going on, and how to move forward from here?

## 2.6. Solutions – Where to from here?

Since poverty faced in households is one of the major causes of child labour, Grootaert and Kanbur (1995:199) suggest equitable distribution of economic development as well as emphasis on fertility reduction and lower schooling costs. While I agree with the equitable distribution of wealth and free education – ethically, I find it questionable to want to control the fertility of families just because of their socio-economic standing. Even disenfranchised people have the right to human dignity and bodily autonomy. It is important to also note that there has been a problem in the adoption and application of legislation in the past, especially with conventions and recommendations sponsored by the ILO to ban child labour (Grootaert & Kanbur, 1995:199). They have been identified by Grootaert and Kanbur (1995:199) as follows:

- 1) Limited interest / advocacy groups to support legislature.
- 2) Many governments would much rather hide the fact that child labour exists in their countries because of the stigma and embarrassment.
- 3) Employers oppose the legislation and are hostile to implementing it.
- 4) Child workers and their parents can be hostile toward the legislation as well.

To address these challenges, Grootaert and Kanbur (1995:200) have put forward three suggestions: firstly, having laws that address the conditions in which all workers work, and

ensuring that relevant regulations are applied to all employees, including children. Instead of eradicating child mining altogether, they argue, there should be a phasing out process. Initially, employers should be mandated by law to limit the workdays of children and ensure adequate safety equipment, personal protection equipment and lighting, for example (Grootaert & Kanbur, 1995:200). Secondly, governments should have compulsory schooling laws that could initially allow working children to work part-time. This can be a collaborative effort with community members where there is a community-based monitoring of school enrolment and attendance (Grootaert and Kanbur, 1995:200). This is far more effective than having an inspector from the education department visit schools once a year or term. Finally, governments could have special programmes that cater for children that are workers, for example having a government-funded feeding scheme at the mines where children work, having a nurse visit the site to treat child workers for free, and restricted workday and hours for children so they can still attend school part-time (Grootaert & Kanbur, 1995:200).

For effective policy implementation, Grootaert and Kanbur (1995:200) furthermore argue, a combination of legal and economic incentives is needed to combat child mining. The effectiveness of this legal-economic combination can be heightened by increasing advocacy efforts as well as empowering families and communities (Grootaert & Kanbur, 1995:200). Governments are encouraged to shift away from their attitude of blatant denial of child labour and/or their ‘all-or-nothing’ approach when it comes to bans (Grootaert & Kanbur, 1995:200) because both approaches are unrealistic and have failed historically.

In contrast to the incremental approach of Grootaert and Kanbur (1995), Garg (1999) is a major proponent for an aggressive approach to action for combating children’s labour rights that are violated at a transnational scale (Browne et al., 2004:5), and advocates for strict policy measures like in the Child Labour Deterrence Act (CLDA) of 1997 of the US, as the best route to the elimination of child labour. The CLDA stipulates that “products a child helped to produce, manufacture, or extract for, under involuntary servitude” or “under exposure to toxic substances or working conditions or otherwise serious health hazards” are illegal (CLDA, 1997). The CLDA has been proposed over various years with varying versions in the United States since 1989, however, it is the 1997 version, according to Garg, that is of the most importance because this version of the Act prohibits the US from importing, manufacturing and/or mining goods that were produced utilising child labour (Garg, 1999:506). A big question is of course whether the USA complies with its own law in all respects when it comes to important goods from other countries. The case studies offer great insight on this matter ...

To conclude, there are various frameworks and regulatory measures that have been instituted by governments and international organisations, but they fall short in the implementation stages, besides the problems they have in conceptualisation and justification. Given my position on a *context-specific* approach, and the different degrees of policy implementation, I contend that Garg's approaches are possibly too aggressive, but this is to be fleshed out in my case studies.

## 2.7. Conclusion

Child mining is an environmental issue, and this chapter has illustrated the inadequacy of the *one-size-fits-all* model and the moral issue with giving the poor and disenfranchised only instrumental value, and only the rich intrinsic value, a point that I will return to in my two case studies. Poverty is the running theme as a contributing factor in the existence and perpetuation of child mining and intermingles with education, household socialisations and economy. It is easy to assign responsibility to governments and multinational corporations to eradicate child mining, however, the issue runs deeper. Until international organisations evaluate their privilege, complacency, moral imperialism, and implicit biases when establishing policies and frameworks and consider the children engaged in labour as individuals granting them their intrinsic human rights, the abolition of child labour is far from being actualised. For a more context-specific approach to child mining to be effective and be sustainably utilised for the abolishing of any future child exploitation then child miners and their families need to be recognised as stakeholders in the manufacturing and production supply chain. This will not only offer value to child miners but will also empower them. Resources such as advocacy and education are the bare minimum.

Now that the descriptive scope of my study has been provided, the following chapter will provide an in-depth look at child mining in present-day India and evaluate their policies thematically: historically, economically/ politically, and ethically. In Chapter 4 I will conduct a similar case study on child mining in the DRC, while Chapter 5 will be devoted to my conclusion and recommendations.



## Chapter 3: Case study one - Mica child mining in India

### 3.1. Introduction

The literature review of this paper gives context to the normative scope and theoretical narrative of child mining, and its exploitative nature since its advent. While the literature review references various studies and references, this and the following chapter will be the illustration that accompanies chapters one and two. Not only is the exploitative practice of child mica mining under critique, but so are the multinational cosmetic industries that fuel this business, as well as the Indian government – for their failure to listen to advocacy groups and implement working policies and programmes.

This chapter is a case study on the current practice of children mining mica in the remote villages of India's poorer provinces: Jharkhand and Bihar (Driscoll, 2017:5). Mica, or muscovite is a shiny mineral that is used in the beauty, construction, automotive, medical and defence industries (Bliss, 2017:23; Bhalla, Chandran and Nagaraj, 2016; Makower, 2020). These illegal mines vary from simple holes dug in the ground to ten-meter-deep holes that are connected via tunnels (DanWatch, 2014:10). Bhalla et al. (2016) further describe mica as a mineral that has increased in popularity in recent years because it was considered to be environmentally friendly. Mica is a mineral of igneous and metamorphic origin and was first mined in India approximately 4000 years ago for medicinal purposes (Bliss, 2017:24). This chapter will interrogate how a mineral with such humble origins has come to be central in the perpetuation and sustenance of illegal mica mines. The legislation and regulatory frameworks that have been instituted will also be under scrutiny, as well as the moral responsibility of multinational companies. This case study will provide a backdrop, together with that of cobalt mining in the DRC, for the need of a *context-specific* approach to child mining, as opposed to the traditional '*one-size-fits-all*' approach.

### 3.2. Historical context of child mining in India

Jharkhand Province, in India, hosts one of the world's largest mica deposits (Bliss, 2017: 24; Makower, 2020). It was the British who "discovered" the mica belt in India in the late 19<sup>th</sup> century (Bliss, 2017: 24; Bhalla et al., 2016). The mica belt covers the Jharkhand, Koderma, Gridish and Hazarbag districts, as well as the Bhars, Nawada, Jamui, Gaya and Bhagadpur

districts, as seen in Figure 3 below. Jharkhand is located 200 miles west of the city of Kolkata and Bihar is situated slightly north of Jharkhand (Makower, 2020).

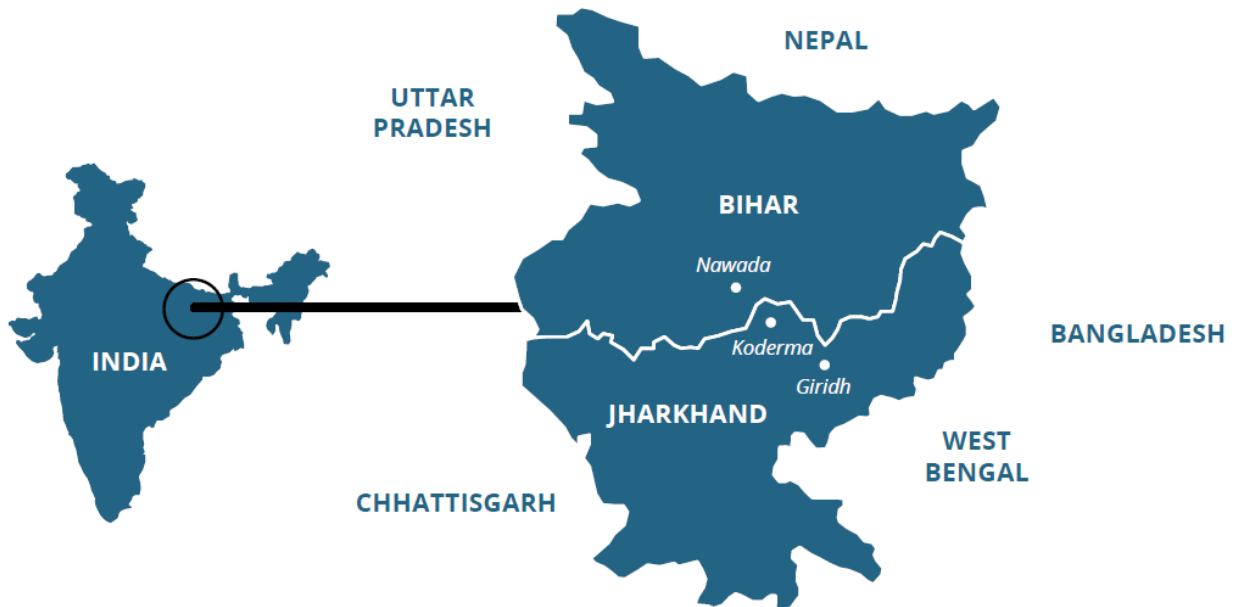


Figure 3 - Map showing the regions producing mica in India.

Source: DanWatch, 2014:7.

The Jharkhand and Bihar regions provide a quarter of the world's mica production, however, there has been a steady decline in the number of legal mines in this region (Bliss, 2017:27). A major contributor to this decline was the discovery of a mica substitute in 1943 (Bliss, 2017:24) and to add insult to injury, a rise in conservation efforts by the Indian state, the Forest Act of 1980 was ratified, which prohibited mining in forested areas (Bliss, 2017: 24). With the dissolution of the USSR, India's biggest importing country, the mica mining industry saw a major decline (Bliss, 2017:24). The decline in demand of mica caused legal mines to shut down, leading to increased unemployment rates as well as increased levels of poverty in mining villages (Bliss, 2017:24). Ten Kate, Schipper, Kiezebrink and Remmers. (2016:22) estimate that there are approximately 300 such poverty-stricken rural villages with a total population of about 270 000, and children under the age of seven making up nineteen percent. The decline in legal mines was so drastic: going from 432 mines in 1961 (Bliss, 2017:27) to 147 mines in 1980, and 73 legal mines in 1986 (Ten Kate et al., 2016:24); to only two in 2016 (Bliss, 2017:27). Of these two mines that are legal and currently operating, one is owned by Modi Moca Enterprises – and the second mine is owned by the company, Chauru Ram, while Merck

is a customer of both these mica mines (Ten Kate et al., 2016:24). Child mining is rife in these small Indian villages because of the high child population – a population with small hands that are ideal to pick and sort mica (Bhalla et al., 2016). Makower (2020) also highlights this running theme of children being employed on mines because of their “ability to fit into small spaces,” an excuse used since the 18<sup>th</sup> century in the industrial revolution in Britain, as mentioned in the literature review (Grootaert & Kunbar, 1995:195; Hindman & Smith, 1999:26; Humphries, 2003:176).

From the initial 73 legal mines that existed in 1986, by 2014 only 38 mines remained and by then a black market had been developed by the existence of a ‘mica mafia’ (Bliss, 2017: 24). As a means of mitigating the existence of a black market, the Indian government reclassified mica as a minor mineral, which allowed the government to grant mining licenses for small-scale mining operations (Bliss, 2017: 24). What has now contributed to the occurrence of a mica "mafia" is the fact that (i) over seventy percent of illicit mica production and mining occurs in protected forests and/or abandoned mines, and (ii) illegal mine operators continue to employ child miners, and exploit adult miners (Bliss, 2017:24). Another unfortunate factor contributing to illegal mica mining is the fact that mica occurs in remote, rural locations where inhabitants have limited access to resources, so they are more likely to rely on mica mining to provide income – as dangerous and illegal as it is (Bliss, 2017:24). Illegal mines that have been mentioned, refer to mines that are typically small-scale mining that is cheap, low-tech and involves labour-intensive excavation and processing of minerals (O’Driscoll, 2017:1).

### 3.3. Social factors in child mining

A tenth of the children in the Jharkhand/Bihar region do not attend school because they have been forced to seek work in the mines (Bliss, 2017:27) by their parents or circumstance. To curb this trend, the Indian government established more schools, especially for children of ages six to fourteen (Bliss, 2017:27). Additionally, mica traders faced prosecution if they employed children (i.e., if they were caught purchasing mica from children), under the *Child Labour (Prohibition and Regulation) Act of 1986* (Bliss, 2017:27). The *Child Labour (Prohibition and Regulation) Act of 1986* prohibited children fourteen years and younger from working in underground mines, cutting and/or splitting mica, working on processes involving exposure to free silica – including mica mines (O’Driscoll, 2017:5).

There is a link between the exploitation of nature and the exploitation of society’s most vulnerable: women and children (Camey, Sabater, Owren & Boyer, 2020:32), and this link has

been explored by the International Union for Conservation of Nature (IUCN). The IUCN is a member union formed under the United States Agency for International Development (USAID) in 1948 to help the agency equip public, private, and non-governmental organisations with knowledge and infrastructure to enable human and economic development to take place in conjunction with nature conservation (Camey et al., 2020:ii). The IUCN found, in a book they published, that there is a link between increases in gender-based violence (GBV) and land rights injustices, as well as GBV being utilised as a tool to further illegal mining activities (Camey et al., 2020:32,88). In the evidence examined, the IUCN saw that when men migrate as labourers to often remote, illegal mines for work, the incidences of sex work and sexual exploitation increased in some of the Latin American case studies (Camey et al., 2020:89). The IUCN further reports that it is often indigenous communities that live in these remote mining areas, far from the reach of the political hand meant to protect and defend these often-impoorished communities (Camey et al., 2020:89). It is no surprise that this phenomenon is found in the mica mining industry as well. Women miners are the poorest and most exploited because not only are they at the bottom of the social hierarchy, but they are also at the bottom of the mica production hierarchy too (Bliss, 2017:26). This is because they lack formal training, education, legal status, and have no power over land and the mineral resources this land possibly contains (Bliss, 2017:26).

A typical life of a child miner begins with children as young as four being employed on illegal mines, sometimes working with their siblings and parents on the same mine. On these mines, they hammer rocks to loosen the mica, carry the heavy raw minerals through dangerous tunnels and transport them above the earth's surface (Makower, 2020). Once the load is above the ground, the mica flakes are separated from the rock and then the sorted mica is taken to 'collection' facilities where traders and intermediaries buy the mica (Makower, 2020). These child miners work long hours, under arduous conditions and almost none of them end up in the schooling system (Makower, 2020). As a result of the rise in mica-related deaths, especially in children, the Indian government was pressured to then legalise mica mining to curb the deaths on the illicit mines (Makower, 2020).

It is common for women to be employed on mines because they are engaged in bondage labour, which is described by Bliss (2017:26) as a method of employment that is common in rural or remote villages where people work on mines to repay loans that they took out from illegal mine operators. Bondage labour or debt bondage is rife in the mining industry because mines are

typically found in remote areas that are inaccessible, meaning that law enforcement is absent, and social services are scarce or have been neglected (ILO, 2019b). Debt bondage is a common occurrence in mines and the ILO (2019b) reports that it also occurs in mines in Zambia, Zimbabwe, Nigeria, Ghana, Sierra Leone, and the DRC, to mention a few countries. Parents can also enlist their children to work in mines as part of their bondage payment, and in these illegal mines where there are no resources, children are favoured as employees because they can reach into the crawl spaces and dig the mica out. These situations that are so easily created where parents work in the same mines as their children or send their children to work as debt repayment, illustrates the interplay between two contributing factors to child mining: household structure and labour markets (Humphries, 2003:183).

### 3.3.1. Caste system and Jharkhand

Jharkhand is a poorly developed state in terms of delivery of socio-economic services despite being a region rich in mineral resources (DanWatch, 2014:14). This can be attributed to the fact that Jharkhand has a high population of indigenous people, and because of the Indian caste system, this population has succumbed to historical marginalisation (DanWatch, 2014:14). It is no surprise that the majority of children employed on mica mines come from these ethnic groups, as stated by DanWatch (2014:14). India is prolific for its caste and tribe system – this is a historic practice where certain tribes were neglected and deemed untouchable because of their low-class standing within social thinking (Ten Kate et al., 2016:22). The caste system has been practiced in India for approximately 3 000 years and it is defined as a system of organising the social hierarchy in not only Hindu people, but Indian society as a whole (Pew Research Center, 2021). The caste categories are assigned on the basis of purity and lower caste categories consist of scheduled castes (Dalits), scheduled tribes and "other backward classes" (Pew Research Center, 2021). BBC News (2019) reports that although the new Indian constitution legally banned the discrimination based on caste class that targeted scheduled castes and tribes in 1950, caste identity remains entrenched in Indian society. Additionally, one's last name "almost always" provides an indication of what caste a person belongs to (BBC News, 2019), so the discrimination continues and seems to be inescapable.

Caste and tribe communities consist of the Dalits and Adivasi people making up 19 and 5 percent of the population, respectively (Ten Kate et al., 2016:22). The Dalit people are considered to be dirty and have no position, "untouchables" within the Hindi community and the Dalits encounter constant caste discrimination (Ten Kate et al., 2016:22). The Adivasi

people are part of the officially recognised tribes and are considered to be the indigenous people of Jharkhand (Ten Kate et al., 2016:22). Given how classist the Indian society is, it is no surprise that all that the people of Jharkhand know is displacement and disenfranchisement, as described by Areeparampil (1996). The indigenous people of Jharkhand, like the land, are not exempt from mass exploitation at the hands of developers from mining and industrial sectors (Areeparampil, 1996:1526). Up until now, I have been waiting for a scholar to make the very direct and necessary statement on how the intrinsic value of the indigenous people has been stripped and continuously exploited, but Areeparampil (1996:1527) states this very clearly in the following excerpt:

They [indigenous people of Jharkhand] are systematically and methodologically being dispossessed of the ownership of their means of production, of the products of their labour and of the very means of human existence. They are dispossessed of their political autonomy ... in the name of 'development' for 'natural interests. A new type of internal colonialism is being unleashed ...

This statement goes to highlight why human rights issues are environmental issues, because this very statement can be applied to what the child mica miners experience, and also what nature experiences given their moral standing – further reinforcing the need to protect the most vulnerable in society.

### 3.3.2. Working conditions – ‘a day in the life of ...’

In their report on the violations of human rights along the global supply chain, the Human Rights Watch (HRW) list examples of human rights problems in the global context, as given by workers, employers, state officials, and concerned civilians (HRW, 2016:5). In the examples stated: child labour; environmental degradation and health violations, are a few examples (HRW, 2016:5-7). With the problem of child mining, children are affected two-fold. Firstly, mining is considered one of the worst forms of labour, and mining operations not only damage the environment, but also puts the health of the miners, as well as the surrounding community in jeopardy (HRW, 2016:6-7). It is not unusual for small-scale, artisanal mines to contaminate drinking and irrigation water. This is a small illustration of the running theme of the disenfranchised and helpless: nature, women and children, and the poor are constantly being exploited.

This paper has established the moral problem of child mining and in the literature review, the historical context of child mining was provided as well as the contributing factors. However, I find it necessary to highlight, furthermore, the working conditions and social plight the children

working in mica mines are exposed to. A typical workday involves an eight-hour work shift where boys as young as five years, crawl down narrow, dark, crumbling mine shafts to cut mica out of the ground using a hammer and a chisel (Bliss, 2017:28). Children working on these mines often arrive there hungry and work alongside adults that are often family members, also working with pangs of hunger. Other occupational hazards include head injuries, skin cuts, scratches, infections; lung infections such as silicosis, tuberculosis, and asthma; and ultimately – death (Bhalla et al., 2016). DanWatch (2014:7) further states that child miners risk inhaling dust from cutting stones out of the walls, and they risk getting stuck by stones falling loose as they dig them out.

### 3.4. Economics of mica mining

#### 3.4.1. Supply chain

Ten Kate et al. (2016:18) reported a spike in mica exports of seventy-five percent from 2005 to 2015, with the approximate mica exports being 78 000 tonnes in 2006, to 136 000 tonnes in 2015. Over these ten years, the main importing countries of mica from Jharkhand/Bihar were China (67%), Japan (9%), Belgium (7%), and the US (6%), as reported by Ten Kate et al. (2016:18). In the year of 2013/2014, the Bureau of Mines reported that India produced 19 000 tonnes of mica but in exports reports, they recorded 128 000 tonnes (Bhalla et al., 2016; O'Driscoll, 2017:8). This shows that there is a major discrepancy – the difference of mica production has to come from illegal mines that practice forced labour and/or child mining.

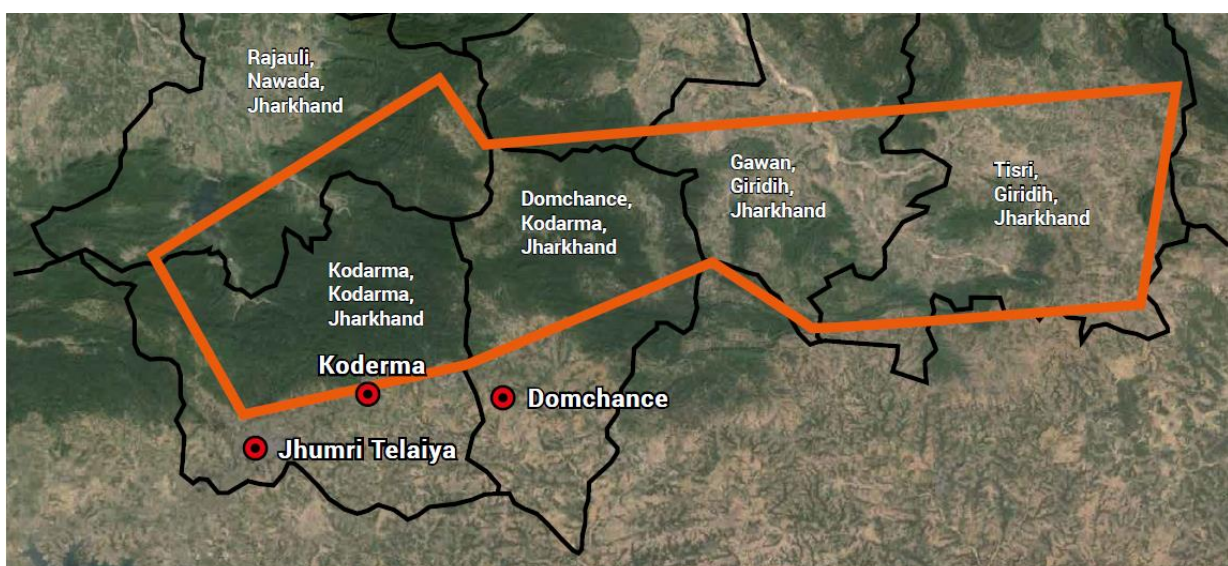


Figure 4 - Map of districts and subdistricts in the Jharkhand mining area.

Source: Ten Kate et al., 2016:21.

The Koderma District in Jharkhand (Figure 4) has a very complex global supply chain from the miner to the consumer (Bliss, 2017:25). Child and adult miners dig out the mica found in illicit mines in the jungle, the mica is then collected and weighed (DanWatch, 2014:14). They sell this excavated mica to intermediaries and then it is bought by a collector or trader, then transported to Domchanch (Bliss, 2017:25; DanWatch, 2014:14). In Domchanch, the mica is sold to middlemen for processing (where it is cut, refined, and sorted), as Bliss (2017:25) describes. Thereafter, the exporters select refined mica for further processing, according to the requests of international clients or buyers (DanWatch, 2014:14). These international buyers are typically large cosmetic companies who conduct minimal checks, if any, on the intermediaries and where they source their mica (DanWatch, 2014:15). The mica is then sold to a retail marketer, until it finally makes its way to a consumer (Bliss, 2017:25; DanWatch, 2014:14). This entire supply chain typically has no paper trail, which makes tracking where these goods land a difficult task (DanWatch, 2014:7). Makower (2020) goes further to describe the supply chain followed by the child-mined mica as a “maze”, which fully encapsulates this process. DanWatch (2014:14) also describes the legal routes taken by the supply chain. The supply chain of a legal mine is fairly simple; the mica is typically either owned by the exporter, or it is sold directly to the exporter – who then sells it to foreign buyers (DanWatch, 2014:14).



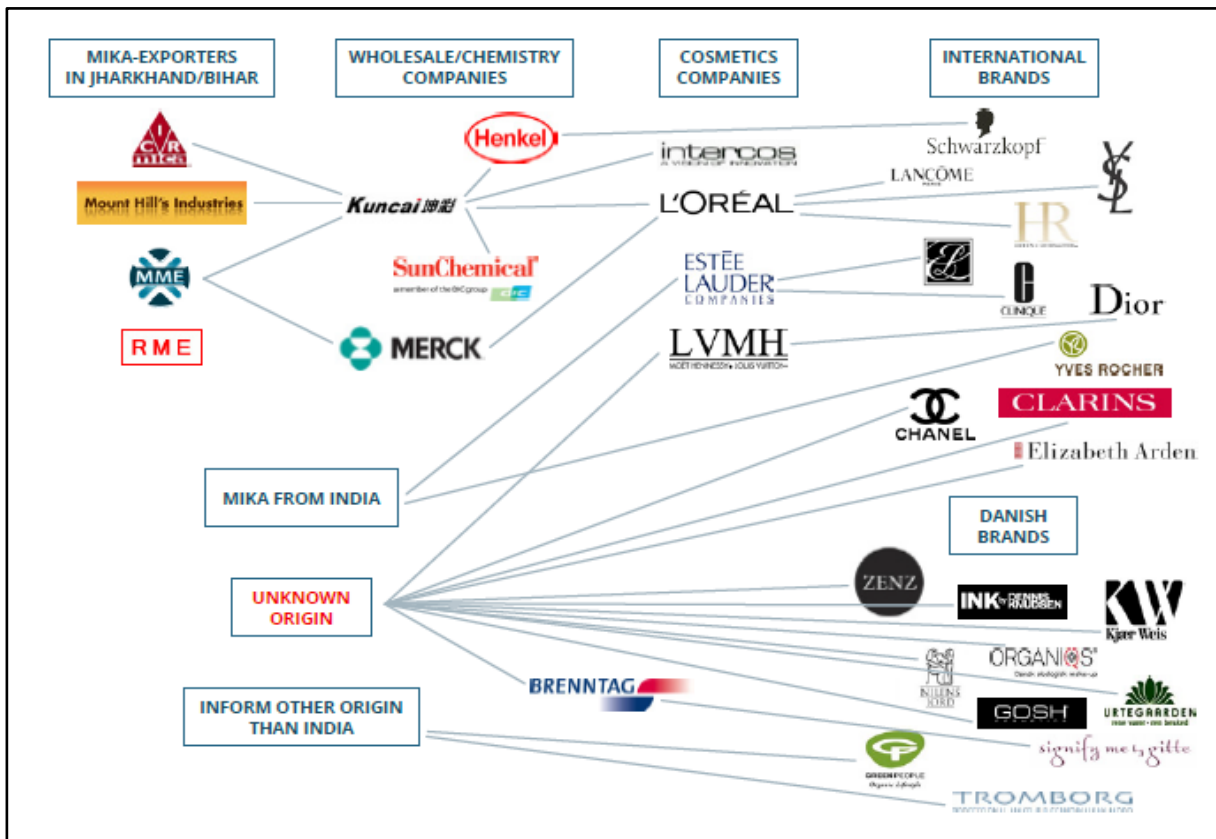


Figure 5 - Jharkhand/Bihar Mica supply chain to cosmetic companies.

Source: DanWatch (2014:17).

The infographic above (Figure 5) shows L’Oréal as a central player in the supply chain and DanWatch (2014:18) have found that L’Oréal purchases mica from mines in the Jharkhand/Bihar region through Merck, a chemical and pharmaceutical company; as well as Kuncai. Kuncai is a Chinese-based company that also supplies L’Oréal with mica, however, their business does not mandate suppliers and intermediaries to only provide child labour-free mining, L’Oréal ends up receiving *Bloody Mica* (DanWatch, 2014:17).

### 3.4.2. Economic analysis of Jharkhand mica in the global market

Mica is processed in three different ways for further processing and manufacturing – it is either flakes, powder, or paper. From these three forms, we find end-products containing mica, as illustrated in Figure 6 (Ten Kate et al., 2016:15). Children are responsible for cutting and splitting mica and other hazardous work, adding the distinctive *crimson shade* to these much-sought pearlescent pigments.

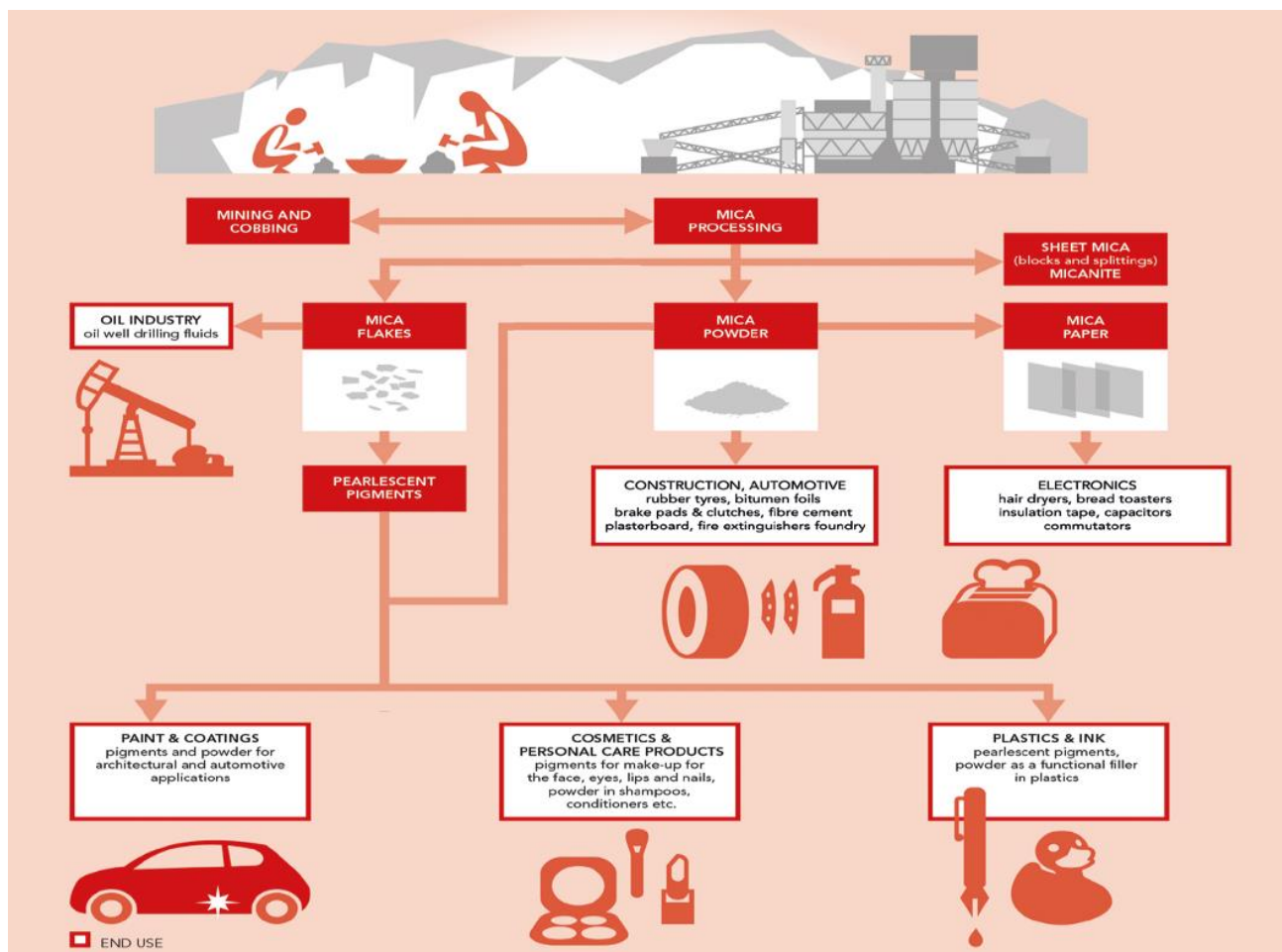


Figure 6 - Mica processing steps.

Source: Ten Kate et al., 2016:15.

While mica has multiple uses, it has a significant market in the make-up or cosmetics industry. It is used in products such as eyeshadow, mascara, lipstick, highlighters, and foundation (DanWatch, 2014:6). Some of the biggest cosmetic companies source their mica from the illegal mines in the Jharkhand/Bihar region (DanWatch, 2014:10). The main importing companies of mica from Jharkhand/Bihar in its pearlescent pigment form (for cosmetics) are Kuncai, Merck, Ruicheng, Chesir and Rika – importing a sum of 18 600 tonnages in the first half of 2015 (Ten Kate et al., 2016:27).

Table 1 below, indicates the main exporting mica companies in India and how much of their sales can be attributed to Kunai, Merck, Chesir, and other international companies (Ten Kate et al., 2016:28).

EXPORTER IN INDIA	TOTAL EXPORT VALUE (INR MILLION)	SALES TO MAIN CUSTOMERS (INR MILLION)				
		KUNCAI	MERCK	RUICHENG	CHESIR	OTHER
Gunpatroy	197	14			22	161
Mount Hill's	195	102			20	73
Jai Mica	130			33		97
Pravin	117	31			10	76
Modi Mica	95		23	50		22
Vedant	93	8			25	60
Pachisia	67		57			10
Mohan Mica	36	31				5
Kritika Enterprises	40	4				36
Ramdew Modi	39		38			1
Alpha International	37					37
Ratan Mica	36					36
Kedamath Ramgopal & Sons	33					33
Daruka	26					26
Mohan International	26		26			0
Manoj Kumar Bhadani	23		23			0
Pearlescent Minchem (India)	22	8				14
Other	359	3	0	4	3	349
<b>Total</b>	<b>1,571</b>	<b>201</b>	<b>167</b>	<b>87</b>	<b>80</b>	<b>1,036</b>

Table 1 - Main mica exporting companies.

Source: Ten Kate et al., 2016:28.

### 3.5. Application of regulation and international frameworks in India

The first Indian legislation to restrict children from working in mines, the *Mines Act of 1923* aimed to discourage children from seeking employment in dangerous working conditions, especially when it came to the children's health and safety (Browne et al. 2004:16). The first

legislation to address children working and recognised child labour as a part of the official labour force, was the *Factories Act of 1881* (Browne et al., 2004:16; Ramanathan, 2009:1). When the ILO was established in 1919, India was one of the first ten founding, non-elective, and permanent members (Browne et al., 2004:16). This shows that the government has always had an issue with child mining, but also that historically, they have shown keen interest to eradicate the problem. In 1933, the Indian government passed the *Children Pledging of Labour Act* as a way of prohibiting parents and guardians from what Browne et al. (2004:16) refer to as “pledging,” a practice where kids are “pledged” to employers in return for some money that the adults may need. This is a type of debt bondage. In this act, a ‘child’ is classified as “a person under the age of fifteen” and the punishment for whomever willingly, and unwillingly employs a child bound to a debt bondage could incur a fine of fifty to two hundred Rupees (Ramanathan, 2009:1).

In 1938, the Indian government made further legal provisions for employed children in the *Employment of Children Act*, where the minimum age of employment was stipulated to be fourteen years for specific occupations, mining and any railway being a part of that (Browne et al., 2004:17; Ramanathan, 2009:1). Although the Indian Constitution was already promulgated in 1950, with Article 24 stating that “No child below the age of 14 years shall be employed to work in any factory or mine or engaged in any other hazardous employment,” as stated by Ramanathan (2009:1) – it was only in 1986 when the most comprehensive child labour law was passed – the *Child Labour (Prohibition and Regulation) Act*, also known as CLPRA (Browne et al., 2004:21). CLPRA was ratified and, during the initial days, an NGO based in Bangalore argued that factors leading to poverty cause children to resort to working, therefore, regulations should aim to target children’s working conditions as opposed to completely eradicating the work they do (Browne et al., 2004:21). This particular NGO can be seen to be a proponent of mitigating worst forms of child mining by improving the working conditions – meaning seeking “harm reduction” solutions. With such varying ideologies being shared by the public, it is only logical for the CLPRA to not blatantly seek to ban child labour, and child mining – but instead permits employment of children in industries not mentioned in the Act (Browne et al., 2004:22). The year after CLPRA was passed, the Indian government announced that they would be adopting a project-based plan of action as part of the National Child Labour Policy (Browne et al., 2004:23). NGOs established a connection with the National Child Labour Project and often do the groundwork, and in so doing, are able to initiate programmes that are aimed at alleviating child mining (Browne et al., 2004:23).

The paper by Browne et al. (2004:35) highlighted that simply banning child mining is not viable, and just the banning alone, can bring possible harm to the very children it seeks to protect. This ties to the unintended consequences that policies tend to bring about, as explained by Humphries (2003:188). Browne et al. (2004:36) go on to state and further emphasise that the main factors of poverty and lack of income, need to be addressed and solved to ensure that families no longer need to be dependent on the income of their children; for survival. Furthermore, state (and NGO) programmes together with the legislature are required to specifically consider instituting economic incentives targeting families as means of encouraging them to disinvest from child mining – for better incentives such as schooling (Browne et al., 2004:36). This would however, mean that resources would need to be allocated to these alternatives, including vocational training (Browne et al., 2004:39).

According to O’Driscoll (2017:1), there are three main conventions that provide the fundamental legal standards for children, namely, the UN Convention on the Rights of the Child, ILO Convention No 182 (Worst Forms of Child Labour), and Convention No 138 (Minimum Age Convention). The UN’s Child Conventions stipulates children younger than the age of eighteen are not allowed to work in the mining industry, and that children younger than the age of fourteen are not permitted to work at all (Bliss, 2017:27). While the ILO has attempted to collaborate with UNICEF<sup>9</sup> and other international organisations, through their International Programme on the Elimination of Child Labour (IPEC), to focus on ending child labour, evidence shows that there is minimal impact that such advocacy has on producing outcomes (Boateng, 2017:3). It does not aid matters that these crucial conventions and programmes are not legally enforceable unless the Indian government ratifies it in its domestic constitution (Garg, 1999:496). This includes the Convention on the Rights of the Child and the IPEC, itself (Garg, 1999:496).

### 3.6. Stakeholder responses

While the preceding sections above state and analyse the drastic failures in regulation, and the human rights violations that the mica supply chain brings, this section will focus on intervention strategies that stakeholders have implemented in their respective responses to this dire situation. The stakeholders involved in ending mica child mining in the Jharkhand/Bihar

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<sup>9</sup> United Nations Children’s Fund.

region are the Indian government, MNCs, international institutions, and local community organisations.

### 3.6.1. Indian government intervention

In 2019, the US Department of Labor (DOL) released their report on the *Worst Forms of Child Labour* in India for the 2018/2019 period and they rated India as having made “moderate advancement in efforts to eliminate the worst forms of child labo[u]r” (US DOL, 2019b:1). With government agencies<sup>10</sup> such as the State Government Labour Inspectorate, the Child Welfare Committee and Vigilance Committees, the Indian government has been able to enforce regulations prohibiting child mining in Jharkhand (US DOL, 2019b:4). The State Government Labour Inspectorate is responsible for facilitating labour inspections on mines, assess the relevant penalties for mining sites found in violation of child mining prohibition in the *worst forms*, and once the labour inspectors have identified these vulnerable children, they are obligated to refer the child miners to the Child Welfare Committee so they can participate in “protection and rehabilitation” activities (US DOL, 2019b:4). According to the US DOL (2019b:4), the Child Welfare Committee then enrolls the child miners in the Integrated Child Protection Scheme. The Integrated Child Protection Scheme provides welfare services to 660 districts in India. Vigilance Committees on the other hand “[r]escue, release, and rehabilitate bonded laborers and family members. Assembled at the district and subdivision levels by the District Magistrate,” as stated by the US DOL (2019b:4). Furthermore, the US DOL (2019b:5) explains that the *Office of the District Magistrate* is responsible for enforcing the labour law violations, as monitored by the Indian labour department, and it is then the police that are responsible for the criminal law enforcement tier of the Indian government’s labour laws (Table 2). Table 2 below also illustrates a summary of the criminal law enforcement efforts that the state agencies undertook in the 2018/2019 reporting period (US DOL, 2019b:6).

<b>Criminal Law Enforcement Summary</b>	<b>2018</b>	<b>2019</b>
Initiated training of new investigators	Unknown	Yes
1. Trained on new legislation and regulation related to <i>Worst Forms of Child Labour</i>	N/A	Yes
2. Administered “refresher” courses	Yes	Yes
Number of Investigations	Unknown	Unknown
Number of Violations Found	942	Unknown

<sup>10</sup> As stipulated in the Child Labour (Prohibition and Regulation) Act (as amended), Act 61 and Act 35. Enacted: 1986, July 10, 2006 and July 30, 2016 (US DOL, 2019b:15).

Number of Prosecutions Initiated	1 168	Unknown
Number of Convictions	690	Unknown
Imposed Penalties for Violations Related to The Worst Forms of Child Labour	Unknown	Yes
Reciprocal Referral Mechanism Exists Between Criminal Authorities and Social Services	Yes	Yes

Table 2 - Criminal Law Enforcement Intervention related to child labour in India.

Source: US DOL, 2019b:6.

To effectively combat and eliminate child mining, the Indian government set up a task force to “implement the Child Labour Act” under the jurisdiction of the Ministry of Labour and Employment (MOLE), and the US DOL stated in their report that between 2018 and 2019, the Task Force only had two meetings (2019b:9), unfortunately. Boateng (2017:16-17) lists the social programmes (Table 3) that the Indian government had made in 2015 after data collected by the US Department of Labour (US DOL) for their *Worst Forms of Child Labour* report that was published in 2016. In this report, the US DOL, also found that India made “*moderate advancement*” in its efforts to eliminate child labour, some efforts including the National Child Labour Project (NCLP), an initiative that saw up to 35 000 children being rescued and rehabilitated after being exposed to dangerous working conditions (Boateng, 2017:16). During their 2018/2019 reporting period, the US DOL found that the NCLP Scheme was able to withdraw children working in dangerous mines, and place them in “vocational training” programmes, while they attend school (2019b:10). Table 3 also illustrates some social programmes that aided the Indian government’s advancement of the county in its quest of eradicating child labour, as reported by the UD DOL in 2015 (Boateng, 2017:16). State-funding and its importance to the implementation of community programmes emphasises the need for a multi-stakeholder problem-solving approach, echoing Browne et al. (2004:36).

<b>Programme</b>	<b>State funded</b>
National Child Labour Project (NCLP) Scheme	Yes
Grants-in-Aid Scheme	Yes
Rehabilitation of Bonded Labour Scheme	Yes
Integrated Child Protection Scheme	Yes
Welfare of Working Children in Need of Care and Protection	Yes
Childline	Yes

Testing Methodologies to Support Informal Economy Workers and Small Producers to Combat Hazardous Child Labour In their own sectors	No
Education for All Scheme	Yes
Enhancing Teacher Effectiveness in Bihar Operations	Yes

Table 3 - Social Programmes to address child labour in India in 2015.

Source: Boateng, 2017:17 (After US DOL, 2016:537).

When diving further into the impact evaluations and research on the effectiveness of child labour programmes, Boateng (2017:19) notes that there is insufficient evidence from programmes dedicated to developing countries to demonstrate the link from the cause of child labour, to implementing policy to then having the programme come into effect. However, Boateng (2017:20) notes that two previous studies found that the Child Labour Ban Policy of 1986 could have potentially increased the prevalence of child labour in India – echoing Basu (2005) that policy tends to have unintended consequences – yet with this knowledge, activist and advocacy groups are still wanting increased regulation. Why is the information and research taking so long to be updated and adapted? India has been a ratified member of the UN and ILO, yet the legislation and deterrence programs are clearly ineffective.

### 3.6.2. Multinational companies

#### 3.6.2.1. Global Compact

Cosmetic company, L'Oréal, has committed itself to respecting and endorsing human rights along its mica supply chain by becoming a signatory of the United Nations' Global Compact in 2003 (Bliss, 2017:29; L'Oréal, 2021). In addition to this, L'Oréal has committed to obtaining its mica from legal and fenced mines, and by so doing, avoids the possibility of their mica being involved in informal sectors where child mining occurs (Bliss, 2017:29). It is reassuring to know that the company is yielding results, because by the end of 2016 L'Oréal reported that ninety-seven percent of their mica came from reliable and secure sources (Bliss, 2017:29).

Figure 5 above provides an infographic of the cosmetic companies that make mica products from mica extracted by child mining and forced labour. Cosmetic giant, L'Oréal, makes another appearance. My concern in this regard, however, is mainly the fact that cosmetic companies feel comfortable in their complacency when it comes to the issue of the mica supply chain being “fogged up” as DanWatch (2014:17) states. I strongly agree with the contention that multinational companies hide in the loopholes of regulatory frameworks as a way of



evading responsibility for their contribution to the existence of child mining as a socio-economic, political, and environmental issue. Another concern is the fact that if activist and NGO groups have identified a lack of monitoring of intermediaries locally and globally, why has the Indian government and MNCs<sup>11</sup> not intervened to address this gap?

To remedy this, L'Oréal became a member of the UN Global Compact, which seeks members to source responsible suppliers that operate in line with the stipulations of the ILO's conventions, as well as legislation requirements according to the Indian local government (DanWatch, 2014:18). As part of its obligations as a member of the UN Global Compact, the company runs internal and external audits along their supply chain (DanWatch, 2014:18). The fact of the matter is that the L'Oréal Group has been slow in adopting the guidelines and regulations of the Global Compact, because it was only in 2009 that the company decided to reduce its mica sourcing from Jharkhand when they were informed of the children involved in the digging (Ten Kate et al., 2016:79). However, L'Oréal continues to source mica from Merck and Modi Enterprises (Dan Watch, 2014:18), further highlighting the tendency of MNCs to stall intervention measures in their supply chains, because the profits prove too great. The fact that the Global Compact is a "voluntary initiative," (DanWatch, 2014:28) MNCs like L'Oréal are not legally bound to enforcing these regulations by the Indian governments' law. However, because these companies need to have a good business reputation and maintain due diligence, Ten Kate et al. (2016:80) reported that in 2016, L'Oréal conducted independent audits, and on-site visits and reported "the absence of child labo[u]r in mines operated by our suppliers [Merck and Modi Enterprise]."

### **3.6.2.2. Responsible Mica Sourcing Summit**

The Responsible Mica Sourcing Summit is a collaborative initiative that was launched in February 2016 by the Natural Resources Stewardship Circle<sup>12</sup> (NRSC) and Business for Social Responsibility (BSR), as Ten Kate et al. (2016:80) state. This initiative aims to target sixty-three stakeholders (including L'Oréal, Estée Lauder and Chanel) and present to them the social and economic risks of the mica supply chain, and ultimately reach an agreement for these stakeholders to focus on "traceability and transparency, community involvement, and multi-stakeholder governance," as stated by Bliss (2017:29). Estée Lauder donated bicycles to over one-hundred former child miners in 2012 to enable them to cycle to school because of transport

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<sup>11</sup> Multinational companies/corporations.

<sup>12</sup> Cosmetic organisation established in 2008 "by a collective of main cosmetics companies," as described by Ten Kate et al. (2016:30) to ensure sustainable sourcing of raw materials and "best practice" (DanWatch, 2014:30).

challenges (Ten Kate et al., 2016:31). The NRSC reportedly also sponsored twenty extra villages for the NGO Bachpan Bachao Andolan (BBA) in 2015 in order to assist the NGO in ensuring that former child miners aged six to fourteen are enrolled in public schools (Ten Kate et al., 2016:30).

### 3.6.3. Activists and advocacy groups

#### 3.6.3.1. ILO

In its report, the ILO (2019b) suggests a seven-step development plan for businesses to implement in order to address child mining as part of a collaboration with the International Organisation of Employers (IOE). The seven fundamental steps are as follows:

1. Develop a policy commitment that is to be adopted within the organisation.
2. Evaluate the impact of child mining.
3. Act based on the impacts of child mining.
4. Track progress on child mining
5. Communicate performance on child mining.
6. Encourage stakeholder engagement.
7. Establish remedial mechanisms for any grievances (ILO, 2019b).

Education and its importance in combating poverty, child mining and exploitation has been highlighted not only in this case study, but in the literature review, as a whole. The Universal Declaration of Human Rights stipulates in Article 26 that “Everyone has the right to education/ Education shall be free, at least in the elementary and fundamental stages.” Additionally, Article 26 states that “[e]lementary education shall be compulsory,” therefore, as a signatory of the UN the Indian government is bound to legally enforce this right. As evidenced by the current issue of children mining mica in Jharkhand and Bihar, the Indian government and society is failing those that need them the most. Against this background, however, it must be stated that The International Programme on the Elimination of Child Labour (IPEC) of the ILO has not changed its mandate of eradicating child labour by the end of 2021, but this is looking to be an unattainable goal, especially with the global pandemic that is plaguing society – a reality the Global March Against Child Labour (GMACL) is far too aware of (GMACL, 2014; Global Watch, 2021). With the emergence of the COVID-19 pandemic, the direct and indirect consequences on child labour, and their magnitude are yet to be fully assessed (UNICEF, 2020). Boateng (2017:20), however, makes an important note in this regard, further highlighting how children who have access and attend school (early childhood education) seem

to be less likely to engage in child labour – an important fact to note since the pandemic has had far-reaching impacts on schooling. This is a turning point since over 1.5 billion pupils, globally, had their studies disrupted since March 2020 (Global Watch, 2021). With such global figures, the realities of the child mica miners in India can only be worse.

### 3.6.3.2. OECD Due Diligence and the RMI

The responsible sourcing of minerals has been mentioned as one intervention strategy that can help in the monitoring and evaluation process. Van den Brink et al. (2019:392) mention three management approaches to ensuring a more responsible supply chain and these are: due diligence, sustainability schemes and a chain of custody. Due diligence refers to the on-going, reactive, and reflexive process that businesses undergo to ensure that their dealings respect and uphold human rights and dignity, and that their dealings do not actively, and inactively, contribute to conflict (OECD, 2018). The OECD (2021:25) outlines the Due Diligence framework and guidelines that companies can carry out in five steps, as outlined in Figure 7. When analysed, the guidelines focus on social factors and human rights, therefore, Van den Brink et al. (2019:392) argue that this approach is more fitting for *socially responsible sourcing*.



Figure 7 - Five-step Due Diligence Guidelines.

Source: OECD, 2021: 25.

The second approach is sustainability schemes, and these were established with the intention of focusing on measuring sustainability based on production data (Van den Brink, 2019:393). These schemes are developed based on industry standards and certifications that cover a certain criterion in terms of sustainability in the supply chain. However, the problem with these is the fact that there has not been one especially developed for mica mining, as evidenced by the table of sustainability schemes and certifications (Table 7) that were identified by Van den Brink (2019:394) in their paper. Or so we thought. In just over a year after Van den Brink et al. (2019) published their paper, the Responsible Mica Initiative (RMI), collaborated with multiple stakeholders (government mica industry experts, and local communities and civilians) and committed themselves to developing a mica sustainability framework, especially for Jharkhand (RMI, 2020). Ideally the RMI seeks to achieve a fully transparent supply chain (mine to processor, to exporter, then the intermediaries or manufacturers, before the mica makes it as an end-product ready for consumption). However, to succeed, the members of the programme need to commit to repeating the supply chain mapping protocol, to ensure that the data is relevant and that the objectives of the program are met (RMI, 2020) – this is a difficult task when the supply chain looks as complicated as the one depicted in Figure 5.

### **3.6.3.3. Jharkhand Sustainable Mica Policy Framework**

The Jharkhand Sustainable Mica Policy Framework and Vision provides the rationale and historical background of mica mining in Jharkhand, existing legal frameworks and regulations, and also a detailed plan in the document as to how a sustainable, exploitation-free mica supply can be achieved, whilst ultimately formulating a “global sustainability benchmark for the mica mineral” (RMI, 2020). The document has the following nine recommendations on policy interventions for sustainable mica extraction and processing:

1. Establishing a Sustainable Mica Taskforce.
2. Delineating a Sustainable Mica Supply Chain (as illustrated in Figure 13 in Appendix B).
3. Founding a centre dedicated to mica research especially in the economic and social policy planning aspect.
4. Establishing “Sustainable Mica mining lease agreement” with mining operators.
5. Establishing “Self-Help Groups” (SHGs) to aid in empowering workers in the extraction and collection processing stage.
6. Addressing the infrastructure gaps in Labour Rights to ensure the informal mica pickers are afforded labour rights protection.

7. Establishing traceability systems to improve regulatory enforcement of the Framework, throughout the supply chain.
8. Promoting mica-related private sector investments in Jharkhand Province, and
9. Establishing a Mica Development Fund (RMI, 2020).

Appendix C provides an overview of the Jharkhand Sustainable Mica Policy Framework. What the document further explains about this diagram is the stakeholder involvement at the different levels of policy intervention. The green stages or interventions (1, 2, 3 and 9) require all stakeholders to collaborate and contribute. The gold interventions (4, 5, 6, and 7) are government-led interventions, therefore, state intervention is of most importance. Finally, the blue stage (8) requires intervention from the mining industry (RMI, 2020). The missing voice, yet again, is that of the community. Where are the child miners consulted and called upon to collaborate? It is unfortunate that even when policy and frameworks are given to local governments and organisations, those mostly affected are left out of the conversation. None of the suggested intervention strategies focus on establishing enriching and self-sustaining programmes to aid, support, educate, and even rehabilitate children and families that have been affected by the ramifications of child mica mining.

#### 3.6.4. Community engagement

Bachpan Bachao Andolan (Save the Childhood Movement) is a child rights activist group, based in India, that focuses on protecting children from child labour by aiming their prevention efforts on the root causes of child labour and aiming to create “Child-Friendly Villages” (O’Driscoll, 2017:17). The Child-Friendly Villages is an initiative that was established in 2001 by BBA to make certain that villages have no children engaged in the workforce, but instead that all the children in the villages are enrolled in school (Bliss, 2017:29). The BBA reported over twenty mica-related deaths in June 2016 and what was more shocking is that according to official figures, no deaths had occurred because child mining is illegal (Bliss, 2017:27). The BBA Save the Childhood Movement reported that villagers tallied the average of child fatalities per month to ten, and the monthly statistics of adult fatalities was even higher (Bliss, 2017:27). What is even more astonishing is that with such rapid rates of fatality, the families of the victims and the operators of mines do not report these deaths to authorities because the cause of the deaths is illegal (Bliss, 2017:27). District officials are aware of the child mining issue in these remote villages and attribute this problem to the lack of government services and welfare schemes, such as training and schooling (Bhalla et al., 2016). It is clear that geography is a factor. Bliss (2017:29) goes on to report that an estimated ninety percent of 35 000 children in

BBA villages are still in school. This initiative is an example of how much power there is when communities are made stakeholders in activism and legislature that applies to them.

It is evident that the supply chain of mica is not properly monitored, and data is not reported accurately. This then calls for a more responsible supply chain, or *responsible sourcing*, as it is better known, which forms part of business ethical practice. Responsible sourcing is described as a commitment undertaken by companies, on a voluntary basis, to ensure that social, environmental and/or economic factors are taken into consideration when these companies manage their relationships with suppliers (Van den Brink, Kleijn, Tukker & Huisman, 2019:391). In their paper, Van den Brink et al. (2019:391) divide responsible sourcing into three different aspects and proceed to explain the key identifiers of each scope of ‘responsible sourcing’ as reviewed in their literature, namely, *socially responsible* sourcing, *green* sourcing, and *sustainable* sourcing. Table 4, below, summarises the fundamentals of these different approaches.

<b>Socially responsible sourcing</b>	<b>Green Sourcing</b>	<b>Sustainable sourcing</b>
<ul style="list-style-type: none"> <li>● Social aspects of sustainability.</li> <li>● Examples: human rights, labour conditions, child labour, and community health and safety.</li> <li>● Ethical sourcing.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Environmental aspects of sustainability.</li> <li>➤ Efforts aimed only at the environmental issues or factors to the supply chain.</li> </ul>	<p>2. Addresses social, environmental and / or the economic considerations needed for a responsible supply chain.</p>

Table 4 - Approaches to responsible mineral sourcing.

Source: Adapted from Van den Brink et al. (2019:391).

As a way of amending their supply chain, Merck, the largest exporters of mica from Jharkhand, in 2011 decided to establish initiatives to improve the company’s social responsibility profile. Some of the programmes led to the creation of a child-free supply chain, as well as new schools and healthcare centres in the region (DanWatch, 2014:18). To create a child-free supply chain, Merck required that suppliers show proof of owning a legal mine, as well as a certificate from the government stating that there is no child mining involved in the acquisition of the mica (DanWatch, 2014:19). In addition to this, the company collaborated with the BBA to create

Child-friendly villages, but the partnership ended, unexpectedly when Merck announced its withdrawal on 30 June 2012 (DanWatch, 2014:19).

### 3.7. Discussion and analysis

The preceding chapters of this thesis and Section 3.3.2: *Working Conditions*, detail the hazardous and dangerous working conditions child miners, including those in Jharkhand and Bihar face and the sociological, economic, physical, and intergenerational consequences of the exploitation of children. The responsibility and onus of addressing and eliminating child mining, and its associated sectors, seems to shift depending on who you consult. The ‘who’ being international labour organisation and human rights advocacy groups, the local government, mining companies, multinational companies whose success depends on the products and goods manufactured from raw minerals, community members and affected children.

As I was grappling and interrogating the researchers that helped etch out the stills of the lives of child mica miners, I found most of the literature, data, reports, and regulation is funded and provided by international, western, non-governmental organisations. Examples being the ILO, UN, Human Rights Watch, UNICEF, DanWatch and Amnesty International. However, the integrated, multi-stakeholder, and effective programmes and institutional frameworks came from indigenous, local (regional), independent organisations and movements such as BBA and Global Watch. This further reinforces the need for policymakers and decision-makers to prioritise and include local communities, the affected children, and their families in the fight to eradicate child mining. Ideally, this study would aim to conclude with a detailed legislative framework that directly tackles poverty, lack of access to resources and education, upholds the human dignity and rights of the most disenfranchised and exploited minors in the mining industry. However, this would not be possible. To draw from my aim, I seek to explore the solutions and intervention strategies that have improved and alleviated exploitation and poverty in mining communities, such as the Child-friendly Villages pioneered by BBA and combine the approaches of this project with the theoretical frameworks O’Driscoll (2017), Garg (1999) and Edmonds (2007), for example, have established.

In this regard, I have identified the possible solutions or alternative strategies for eradicating child mining in India. These solutions have been considered as they meet the requirements of my aim which proposes a *context-specific-approach* to child mining, and have proved to work,

as shown by my case study of child mining of mica in the Jharkhand and Bihar regions. My proposed approaches, as endorsed by the literature discussed above are therefore as follows:

- i. Address socio-economic factors impacting the surrounding communities by increasing and enabling access to education, improved infrastructure and basic services, work-study programmes, subsidised education, flexible school hours, job creation and skills development.
- ii. Stricter and better regulated, monitored, and evaluated supply chain with labour inspectors coming from all stakeholders, i.e., child miners, their parents and community, advocates, national labour inspectors, representatives from mining companies, brokers, and especially the multinational companies that rely on the export of raw minerals and goods for their functioning.
- iii. Re-evaluation of regulatory and legislative frameworks and international conventions. The legislature and conventions that are supposed to be regulatory guidelines, when analysed, seem theoretically sound. However, implementation constantly falls short, therefore, policymakers and decision-makers need to, after identifying the shortcomings, amend or retract said legislature and conventions.

### 3.8. Conclusion

I found it quite interesting, and actually disturbing, how much of the literature – especially in my literature review; and something that was further highlighted in the literature supporting this study, which I find myself reflecting on – is the children’s silence or invisibility. Researchers are targeting child miners in Jharkhand and their families, in their intervention strategies that aim to eradicate child mining and the hazardous conditions in which the children work, but there is no mention of going to the target audience, interviewing them, having them contribute to each step of policy, regulation, and programmes. While I have consulted sources that have interviewed with the actual child miners, and are doing the groundwork, so to speak, their involvement and inclusion of the child miners’ stories is still at the foundation phase of creating awareness and providing information. These sources are the local organisations that are run by affected and concerned community members or NGOs seeking to lobby more advocates for the cause. I am yet to find a theoretical framework that is aimed at eradicating child mining, let alone the broader problem of child labour existing in the 21<sup>st</sup> century that can say: “We sought out people all over the world who engage(d) or were/are affected by child mining, we presented our suggested policy interventions, programmes, international law and



conventions – we have found x, y, and z as causes of child mining, we aim to address them in the followings steps: 1, 2, and 3, and we have placed their voices and that of child miners in the centre of our proposals.” Ideally, the response to child mining should be: “Given your vast experiences from inside mica mining and the socio-economic contexts enabling child mining in it, what possible shortcomings can be expected from these intervention strategies, what additional factors and strategies have been overlooked, or understated? Thereafter, what evaluation and monitoring frameworks need to be established and implemented, again, seeking out policy experts from the major regions of the world, to get them to collaborate and ensure the policy and suggested legislature is applicable in the different countries within the region,” for example.

This is the ideal scope I would like to encourage scholars, civilians, states, and companies to think about. The Jharkhand Sustainable Mica Policy Frameworks seems to be the closest model of my proposed multi-stakeholder outlook towards ending child mining (RMI, 2020), even if it is also not without its shortcomings.

Having journeyed through the issue of mica mining in India by children and analysing the historic, economic, social, political and intervention strategies (at different stakeholder levels); chapter four will aim to follow a similar path. The case study in this following chapter will be looking at child miners in the Democratic Republic of Congo.

## Chapter 4: Case study two – Cobalt mine(o)rs of the DRC

### 4.1. Introduction

The case study of chapter three in Jharkhand portrayed the intersections of history, the global economy, society, politics, and regulation; and how they mingle in the artisanal mica mines that employ children. The responsibilities of the different stakeholders (government, multinational companies, international organisations, and advocacy groups; and the community members themselves, in eradicating child mining were also highlighted. The case study of children mining mica in India provides solid evidence of the success that a more *context-specific* approach to the problem of child mining can have globally. This chapter is a second case study as part of my methodological discussion and analysis, using the province of Katanga in the DRC. The focus will be the children mining cobalt in illegal mines for big technologies and industries. With the exploitation of the environment for the extraction of cobalt comes exploitative work, and given the scope of this paper, the child miners, or *minors that mine* cobalt (as the chapter title alludes) in the Former Katanga Province in the Democratic Republic of Congo will be the main topic for discussion. The sector that this case study will aim to address, as per the objectives of this thesis, is the electronics and technology industry since multinational companies such as Apple, Dell, HP, Huawei, Samsung, and Sony have been known to source the cobalt used to manufacture their electronic and digital devices from Katanga (Sovacool, 2021:271; Amnesty International, 2016:9).

Cobalt is described as a versatile, silver-grey metal (Slack, Kimball & Shedd, 2017:F4) whose physical and chemical properties (e.g. wear resistance when alloyed with other metals, being a low conductor of heat and electricity, high melting point and numerous valences) have led to the ferromagnetic metal (Slack et al., 2017:F4) to be likened to oil because the metal is the lubricant of the transition to cleaner technology in the so-called ‘digital economy’, as stated by Sovacool (2021:272). However, it was only when big-tech companies, such as Apple, Dell, Microsoft, and Tesla were cited in a case suing for the deaths and terrible injuries of child miners in the DRC, that there was finally action to create consumer awareness on child mining and human rights abuses in the cobalt supply chain (Lawson, 2021). Child miners are made to endure harsh and fatal working conditions to provide cobalt as an important component in digital appliances such as computers, phones, batteries, electric vehicles, solar panels, and fuel cells (Sovacool, 2021:290). While these electronics are essential in the developing world, and for climate change mitigation systems; the people of the DRC do not reap any of these luxuries.

As Sovacool (2021:290) emphasises: cobalt is mined in a system that thrives off of exploiting the vulnerable and links such exploitation to the manifestation of issues such as “slavery, environmental degradation, patriarchy and climate change,” and ultimately child mining.

This chapter will introduce the rise of the artisanal small-scale mining (ASM) of cobalt, the working conditions the child miners endure, the historical and current legal framework and regulation, the rise of Chinese investment in the DRC’s cobalt ASM sector, and the “blood” of children that is at the end of tech users, and producers alike. The intervention strategies the DRC government has taken to formalise ASM, due diligence standards that multinational companies like Tesla, Samsung, and Huayou Cobalt have undertaken will be analysed; and finally, I will provide suggestions for eliminating child mining in the DRC, using frameworks and suggestions from NGOs such as Amnesty International.

## 4.2. History of children mining cobalt in Congo

The DRC is the third largest country on the African continent and is located in Central Africa. The country stretches over 2.3 million square kilometres and is the world’s twentieth most populated country, housing over 80 million people (Sovacool, 2021:272). Due to the nation’s history of armed conflict leading to civil unrest, and the displacement of over two million people, the nation is now plagued by a legacy of poverty, exploitation, lack of infrastructure and service delivery and a low life expectancy rate (Sovacool, 2021:272). Historically, cobalt was mined and produced as a by-product of metals such as nickel and copper and the global supply of this metal is linked to factors affecting the exploration and manufacturing of these associated metals (Wilburn, 2012:1). Such factors are often economic, environmental, political and/or technology-related (Wilburn, 2012:1). The Katanga region or ‘Former Katanga Province’ comprises four new provinces namely, Tanganyika, Haut-Katanga, Lualaba and Haut-Lomami (as illustrated in Figure 8), which the state established in 2015 (Amnesty International, 2016:12).



Figure 8 - Map of new provinces of 'Former Katanga' Province.

Source: Amnesty International, 2016:12.

The rise of artisanal mining as part of the DRC's economy is directly linked to the fall of Congo's largest state-owned mining company (Gécamines) in the 1990s and was further exacerbated when the then president, Laurent Kabila, encouraged citizens of the country to go dig for themselves, since the state could not reinstate the industrial mining sector (Amnesty International, 2016:5; Calvão, McDonald & Bolay, 2021:6). The fact that he said this during a period of civil unrest – the Second Congo War of 1996 to 2001 is very telling of the political history of the DRC (Zientek, Bliss, Broughton, Christie, Denning, Hayes, Hitzman, Horton, Frost-Killian, Jack, Master, Parks, Taylor, Wilson, Wintzer and Woodhead, 2014:32). It was only after the end of the civil war in 2002 that new mining and foreign investment laws were proposed by the interim government at the time (Zientek et al., 2014:32). The government of the DRC was able to promulgate two major legislative frameworks aimed at the mining sector in 2002 with the Mining Code, followed by the Mining Regulations of 2003 – both adopted with the support of the World Bank (Zientek et al., 2014:32; KPMG, 2014:19; Calvão et al., 2021:6). China was one of the first countries to invest in the DRC, and KPMG (2014:20) reports

that over 80% of mining operations in Katanga province are Chinese owned. When comparing the investments coming into the DRC, as a whole – it is evident that this phenomenon does not only exist in Katanga province and nor is it confined to cobalt mining. Figure 9 demonstrates the global suppliers of cobalt and how much of the total was produced by each country in 2011 based on the report published by Slack et al. (2017:F3) for the US Geological Survey (KPMG, 2014:19). The investment inflow into the country in 2003 was US\$ 391 million, and in 2021 the UN reported that the DRC received over US \$ 3.31 billion (KPMG, 2014:19). When their report was published, in 2013, World Vision (2013:10) stated that mineral production of artisanal and small-scale mining was estimated to be between 60 and 90 percent of the whole country. This has prompted multinational companies to establish “responsible cobalt sourcing practices” to ensure they uphold their corporate social responsibility (CSR), and this has prompted these international companies to create hybrid ASM formalisation projects (Baumann-Pauly, 2020). Huayou Cobalt is leading the ASM formalisation project in Kolwezi.

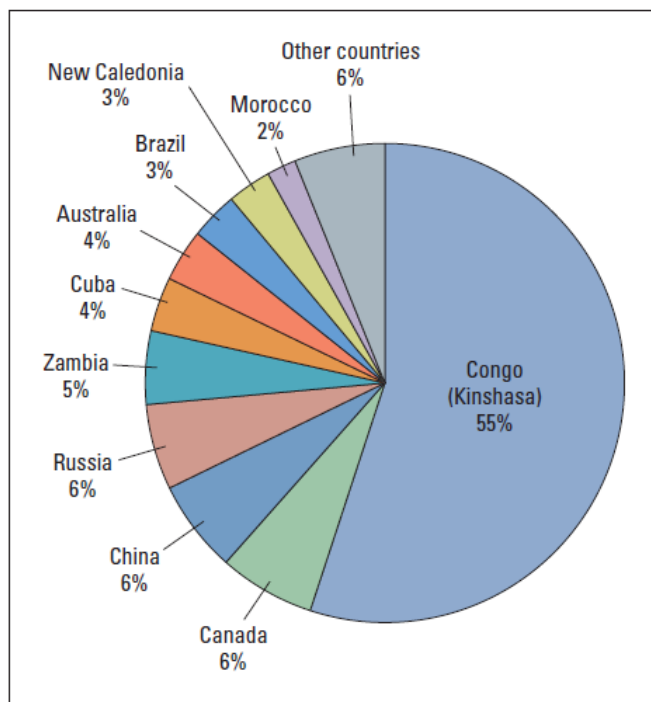


Figure 9 - Global Cobalt Supply (in percentages) for 2011.

Source: Slack et al., 2017:F3.

#### 4.2.1. What is cobalt and the history of its mining in the DRC?

The first geological map of Katanga was first published between the 1880s and 1890s when German and Belgian expeditioners first made way to the precolonial mines in the region (Zientek et al., 2014:30). The first mineral to have systematic exploration operations in the

region was copper, and Zientek et al. (2014:30) found in their research that by 1906, Tanganyika Concessions Ltd (one of the mining operations pioneers), founded more than one hundred “copper workings” on the Belgian side of the border. It was estimated that by 1904, potentially up to 15 million metric tons of copper resources could be explored and mined, which prompted the formation of the Union Minière du Haut Katanga (UMHK) which would monitor and operate the mines of what is now the DRC (Zientek et al., 2014:30). It was only seven years after the Democratic Republic of Congo gained independence from its former colony of Belgium in 1960, that the Union Minière du Haut Katanga was nationalised (Zientek et al., 2014:32). The nationalisation of UMHK led to the establishment of the state-owned metal and production company, “La Générale des Carrières et des Mines” – also referred to as Gécamines (Zientek et al., 2014: 32).

#### 4.2.2. Artisanal cobalt mining in Katanga Province

The use of cobalt in the electronics industry has increased over the years since the mineral has been found to be essential in lithium-ion batteries, rechargeable batteries needed for smartphones, laptops, electrical cars (Amnesty International, 2016:15), and for storing power from wind and solar stations (McKie, 2021). Artisanal miners operate in the Katanga Province and in 2016 Amnesty International (2016:4) reported that there are an estimated 110 000 to 150 000 of them that use the most basic of tools to dig out rocks containing cobalt, from deep underground. These artisanal miners consist of men, women, and children as young as seven years old, who not only work underground, but also rummage for rocks left over from by-products that have been discarded by industrial mines (Amnesty International 2016:4). Artisanal miners work in underground tunnels that stretch deep enough to reach the ore and these tunnels are sometimes self-dug to tens of metres underground (Amnesty International, 2016:5&6). It is usually the adult men that are assigned to work underground, with chisels, mallets, and other hand tools as excavating equipment, and in addition to this, they scavenge and dig for copper in the discarded by-products from old industrial mines (Amnesty International, 2016:5). The miners, children included, are responsible for collecting rocks with cobalt inclusions lying close to or on the surface, picking the stones out, washing them, sifting, and then sorting the stones with the metal (Amnesty International, 2016:5). The washing and sifting process is mostly done by women and children working on the mines, as Amnesty International (2016:5) reports. A report by the CEGA<sup>13</sup> concluded that in the artisanal cobalt

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<sup>13</sup> Center for Effective Global Action.

mines, of the child workers: 26 percent are sorters; 23 percent are surface workers, and 17 percent of them are cleaners (Faber, Krause & De La Sierra, 2017:7).

According to Amnesty International (2016:6), UNICEF found in 2014 that around 40 000 children work in mines, including cobalt mines across the southern region of the DRC (most of Katanga Province). Researchers in the Katanga region found in interviews that child miners work up to twelve hours in the mines and they carry loads whose weight is heavy on their backs, only to earn between 1000 and 2000 Congolese Francs (US\$1-2) a day, as stated by Amnesty International (2016:6). This is a dismal wage for anyone to earn, but even worse when you live in a country that has an estimated \$24 trillion in mineral wealth (World Vision, 2013:10). The child miners only collect this daily wage once they have collected, sorted, washed, crushed, and transported the minerals, and the traders offer payment per sack (Amnesty International, 2016:6). The children are at a disadvantage because they do not have access to tools and skills that help them verify the grade of the ore, and the weight of the sacks – which in itself is the first line of exploitation and inequality (Amnesty International, 2016:6).

### 4.3. Social factors involved

Many of the artisanal cobalt mines come with a slew of safety hazards, with inhalation of the cobalt-laden dust leading to lung disease (McKie, 2021) and for children working near the mineshafts, the lung diseases may not even appear until adulthood (ILO, 2017a:3). The men, women and children working in these dangerous mines have been reported to work without the fundamental protective equipment such as face masks and gloves (Amnesty International, 2016:30; McKie, 2021). The ILO (2017a:3) has also reported that many artisanal workers often have insufficient ventilation, and this has led to reports of suffocation by miners (Amnesty International, 2016:6).

The isolation of the mining communities where cobalt is mined leads to the lack of access to basic resources, which again highlights geography and locality as a factor leading to child mining. In addition to this, law enforcement and regulation bodies are either unable or unwilling to travel to such remote and distant communities (ILO, 2017a:3). It is common for families in mining regions to send their children to work in mines as debt bondage; this practice is not only common in the DRC and India (as discussed in chapter three), but also countries like Nigeria, Sierra Leone, and Ghana (ILO, 2017a:3). Safety is also an added concern when it comes to the girls that often work in mining-related jobs such as selling food to miners or cleaning and doing other domestic work, who are often victims of sexual harassment and

exploitation – in worst cases, trafficking (ILO, 2017a:3). Table 5 lists dangers and potential health risks that are linked to the tasks miners carry out, which illustrates why child mining is considered one of the worst forms of labour (ILO, 2017a:3).

<b>Activities</b>	<b>Associated hazards</b>	<b>Health risk posed</b>
<b>Tunnelling</b>	Drilling equipment, explosives, faulty support, dust, dampness	Serious injury, even death from a tunnel collapse, suffocation, injuries from explosion, silicosis, nausea
<b>Digging (hand-picking) of ore, slabs, rock, or sand</b>	Heavy tools and loads, repetitive movements, falling objects, dangerous heights	Joint and bone deformities; blistered hands and feet; lacerations; back injury; muscle injury; head trauma; noise-induced hearing loss; breathing difficulties; sunstroke and other thermal stresses; dehydration; blunt force trauma, loss of digits, limbs; eye injuries and infections from shards; dust
<b>Crushing and amalgamating; sieving, washing and sorting</b>	Lead, mercury, and other heavy metals; dust; repetitive movements; bending, squatting, or kneeling	Neurological damage; genito-urinary disorders; musculoskeletal disorders; fatigue; immune deficiency
<b>Removing waste or water from mines</b>	Heavy loads; repetitive movements; chemical and biological hazards; dust	Musculoskeletal disorders; fatigue; infections; skin irritation and damage; respiratory issues from exposure to chemicals and dust
<b>Transporting materials via carts or carrying</b>	Heavy loads, large and unwieldy vehicles	Musculoskeletal disorders; fatigue; crushed by vehicles
<b>Cooking and cleaning for adults</b>	Physical and verbal abuse; unsafe stoves; explosive fuels	Injury from beatings; sexual abuse; burns
<b>Selling goods and services to miners</b>	Physical and verbal abuse	Injury from beatings; behavioural disorders, sexual abuse or harassment
<b>Mining and quarrying in general</b>	Remote locations; lawless atmosphere; poor sanitation; lack of protective gear; contaminated drinking water; stagnant water and mosquitoes; inadequate nutrition; degraded environmental conditions in air, water, soil, food; recruitment into sex trade; human trafficking and forced labour; gambling, drugs, and alcohol	Death by lack of medical treatment; behavioural disorders; addiction; sexually transmitted diseases; pregnancy; stunted growth; diarrhoea and digestive disorders; malaria and mosquito-borne diseases

Table 5 - Dangers and consequences associated with mining tasks.

Source: ILO, 2017a:4.

The blatant and brutal human right abuses faced by not only child miners but adult miners at the hands of traders, mine operators, the state and multinational companies are made apparent in specific reports which will be referenced and compared. These include reports from Amnesty International (2016), the ILO (2017a) and that of World Vision (2013). In their report, Amnesty International (2016:5) states findings from UNICEF that in 2014, approximately 40 000



children were found to work in artisanal cobalt mines across southern DRC. In their case study of Katanga province, the children they interviewed reported to working anything between ten and twelve hours a day, and this includes children that attend school (Amnesty International, 2016:6). With poverty being the main reason why families turn to artisanal mining – it is no surprise that children find themselves in mines working alongside their parents and relatives. The child miners reported that their own parents have no formal education, and subsequently, employment, and in turn cannot afford school fees (Amnesty International, 2016:6). This is yet another example of how vicious and generational poverty really is, because although the DRC's *Child Protection Code of 2003* stipulates those children should have access to free and compulsory primary school education, lack of infrastructure and governmental support has led children and parents to the job market (Amnesty International, 2016:6). The shortcomings and inadequacy of the DRC state sees children not being able to go to school because schools need to institute fees to supplement the lack of funding from the state, to ensure teachers are paid, that children are supplied uniforms, and that schools are equipped with the necessary learning aids (Amnesty International, 2016:6). I contend that much of the perpetuation of child mining in cobalt artisanal mines stems directly from the fact that the children are not consulted, and this was pointed out by the ILO in 2011 (ILO, 2011b:xi): but it is almost ten years later and we are still making these suggestions? In their research, World Vision (2013:9-10) undertook interviews of miners in artisanal mines of Katanga, and it is illuminating to see the organisation is able to report, with reference to the child miners how intricate and systematic the interplay of poverty, lack of social services and resources, lack of alternative job opportunities and education, and the impacts of lack of healthcare infrastructure fits perfectly in the whirlwind of exploitation.

The structure of the Congolese society is thus a determining factor in the existence of child mining. In the Congolese communities, women and girls are not expected to uphold arduous occupations because domestic and agricultural work is more socially accepted (Sovacool, 2021:290). However, the reality of poverty leads women and girls to working on mines as diggers, carriers; and sorters, and they are expected to ensure their households run smoothly in terms of chores and child-caring (Sovacool, 2021:290). It is unfortunate that while they are expected to fulfil two different roles, they are often paid less or given less status than their male counterparts – and because of this, most of them are roped into sexual exploitation (Sovacool, 2021:290). Women and girls (as young as twelve) are exploited as sex workers that service the mining communities or are forced into polygamous relationships that are often physically

abusive (Sovacool, 2021:290). This danger that women and girls face is compounded by general threats of violence and verbal abuse, like all the miners face (Sovacool, 2021:290). Children have been beaten by security, sexually abused, chased by dogs, and even locked up because they were caught sneaking into industrial sites and mines to steal batteries, minerals and fuel while trying to meet their daily targets for sales (Sovacool, 2021:290), which speaks to the lengths at which children are being forced to go for their family's survival, all to provide a few more gadgets and electronics for the West, and the affluent few in developing countries. Sovacool (2021:290) echoes these sentiments by saying: "These heart-breaking patterns are a blunt disjuncture to the aesthetically pleasing, clean, high-tech gadgets that we depend on their cobalt for." It is important to note that the children of the cobalt artisanal mines in Katanga engage in work because of social expectations, as opposed to being forcefully coerced (Faber et al., 2017:12, World Vision, 2013), therefore an all-or-nothing- approach, or "top-down restrictions" as Faber et al. (2017:12) describe, can do more harm than good when proposals are made to address child labour in this context.

Miners of cobalt, young and old, are susceptible to developing a potentially deadly lung disease called *hard metal lung disease*, which is caused by chronic exposure to dust containing the mineral (Amnesty International, 2016:5). Inhaling dust particles containing cobalt is also reported to cause respiratory sensitisation, asthma, shortness of breath and reduced lung function (Amnesty International, 2016:5). With these dangerous health risks, researchers found that most if not all minors had no access to basic personal protective equipment. However, counter-intuitive to notice that the *DRC Mining Code of 2002* and the *Mining Regulations of 2003* have no explicit stipulations about mining workers requiring safety equipment, nor do they provide guidelines on how to operate with safety and adequacy around substances that are hazardous to human health, aside from the element mercury (Amnesty International, 2016:5). Children as young as seven are made to work long hours, sometimes in scorching temperatures or even rain, which makes the child miners even more likely to fall ill (Amnesty International, 2016:6) – further illustrating the hazardous nature of mining. A British radio station based in the DRC, Radio Okapi, reported over eighty fatal mining accidents that occurred in Katanga over a fifteen-month period from September 2014 to December 2015 (Amnesty International, 2016:6). The miners themselves have reported that accidents are frequent because the hand-dug underground tunnels lack structural support, and thus are prone to collapsing (Amnesty International, 2016:6).

At elevated levels, cobalt is toxic in solids and water and contamination can occur during the mining, processing, manufacturing, and utilisation phases (Slack et al., 2017:F16). The mining process of cobalt, specifically, is known to generate large quantities of solid and liquid mine waste (Slack et al., 2017:F16) and the “waste” component relates to any materials that come from and accumulate at the mine site that have no economic value. While both are harmful to the environment and the worker, liquid waste is more hazardous as it can easily contaminate the surface and groundwater flowing in and near the mine, which is also referred to as acid mine drainage (Slack et al., 2019:F17). Kara (2018) documented evidence of this on an artisanal cobalt mine in Kolwezi where she saw a 15-year-old girl, with her two-month-old child and many others, digging for cobalt with “contaminated industrial runoff” everywhere. At fifteen, she is forced to work for her and her son’s survival because she lost both her parents in a mine collapse, while also mining for cobalt (Kara, 2018). This illustrates the intergenerational damage of exploitation, because while she is working for survival, her son is exposed to not only cobalt-dust, but also acid mine drainage – all so she can earn \$0.65 when she sells her sacks of cobalt to Chinese Traders (Kara, 2018).

#### 4.4. Economics of cobalt mining by minors

Political instability and the legacy of colonialism are just two leading factors that can be attributed to the state of economic decline the DRC has undergone in the past thirty years. Congolese citizens do not have access to basic services and infrastructure such as clean drinking water, access to electricity and education (Sovacool, 2021:272). These conditions are exacerbated by the fact that multinational companies are very eager to work with developing countries because the labour costs are low, and because the governments of these developing countries lack labour regulations to protect their workers, compared to their developed counterparts (Faber et al., 2017:10). The DRC has also suffered a similar fate at the hands of companies such as Tesla and Huayou Cobalt. However, pressure from local NGOs, international regulators, and consumers has grown over time, campaigning, and lobbying their efforts to ensure that international businesses regulate and monitor their supply chain by establishing “responsible sourcing policies” that will ensure that their products are exploitation-free (Faber et al., 2017:10). For the 2012/2013 fiscal period, the DRC was ranked as the 23<sup>rd</sup> highest country on “Policy/Mineral Potential” by the Fraser Institute’s *Survey of Mining Companies 2012/2013* (KPMG, 2014:6), and Figure 9 (on page, above) lists the top producers of cobalt for 2011 by country, showing the DRC as the highest producer of cobalt, producing 60 000 tonnes – 55% of the global shares, as KPMG (2014:21) also reports.

Huayou Cobalt has conducted business in Katanga since 2006 and has major operations in cities such as Lubumbashi, Likasi, and Kolwezi, and was reported to have purchased cobalt that involved child labour in 2008 by the publication, Bloomberg News (Amnesty International, 2016:53). This story is a few of the rising documentation and media reports by Congolese media, NGOs, and international bodies over recent years. In these documents and reports Huayou Cobalt is held directly responsible for the human right violations and existence of artisanal child mining in the global cobalt supply and is challenged to undertake due diligence and have the responsibility to “remediate the harm suffered by people whose human rights have been abused at any point in the supply chain” (Amnesty International, 2016:70). This can be achieved by ensuring that the worst forms of child labour are removed; supporting and funding the education system in Katanga; and ensuring that child miners and affected communities have access to basic health, educational, financial, social, environmental, and psychological facilities and resources (Amnesty International, 2016:70). Furthermore, the due diligence measures that multinational companies enforce within their cobalt supply chain need to be reflexive, meaning that they make allowances for corrections and improvements to guidelines should human right violations, such as child mining, at any point in the supply chain become evident – be it at extraction, ore processing, or any other points (Amnesty International, 2016:70).

Before providing a description of the cobalt supply chain of Huayou Cobalt, Figure 10 below illustrates the “generic” supply chain of cobalt (Amnesty International, 2016:42).



Figure 10 - Typical cobalt supply chain (Adapted)

Source: Amnesty International, 2016:42.

The cobalt mined by child miners and other artisanal workers is sold to authorised buying houses, located close to the mines and these are typically run by foreign nationals, who buy the ore with the intent to sell it to Huayou Cobalt via CDM<sup>14</sup> (Amnesty International, 2016:18). The DRC’s Mining Code gives the Division of Mines the authority to issue licences to artisanal miners, and to approve trading houses (Samndong & Nhantumbo, 2015:31). CDM then refines the cobalt ore, usually in industrial sites (like in Kolwezi), before exporting the minerals to

<sup>14</sup> Congo Dongfang Mining.

South Africa’s port in Durban via truck (Amnesty International, 2016:18). Once loaded onto the Chinese ships docked at the Durban port, the cobalt is then sent to China to be refined, and processed further, then sold to component manufacturers, as stated by the Amnesty International’s report (2016:18). Figure 10 illustrates (see Appendix A) the artisanal mining cobalt supply chain, as reported by Amnesty International (2016:47) which is consistent with the reality in former Katanga. The global movement of cobalt mined by children in Katanga to, three other continents: North America, Europe, and Asia is detailed below, in Figure 11.

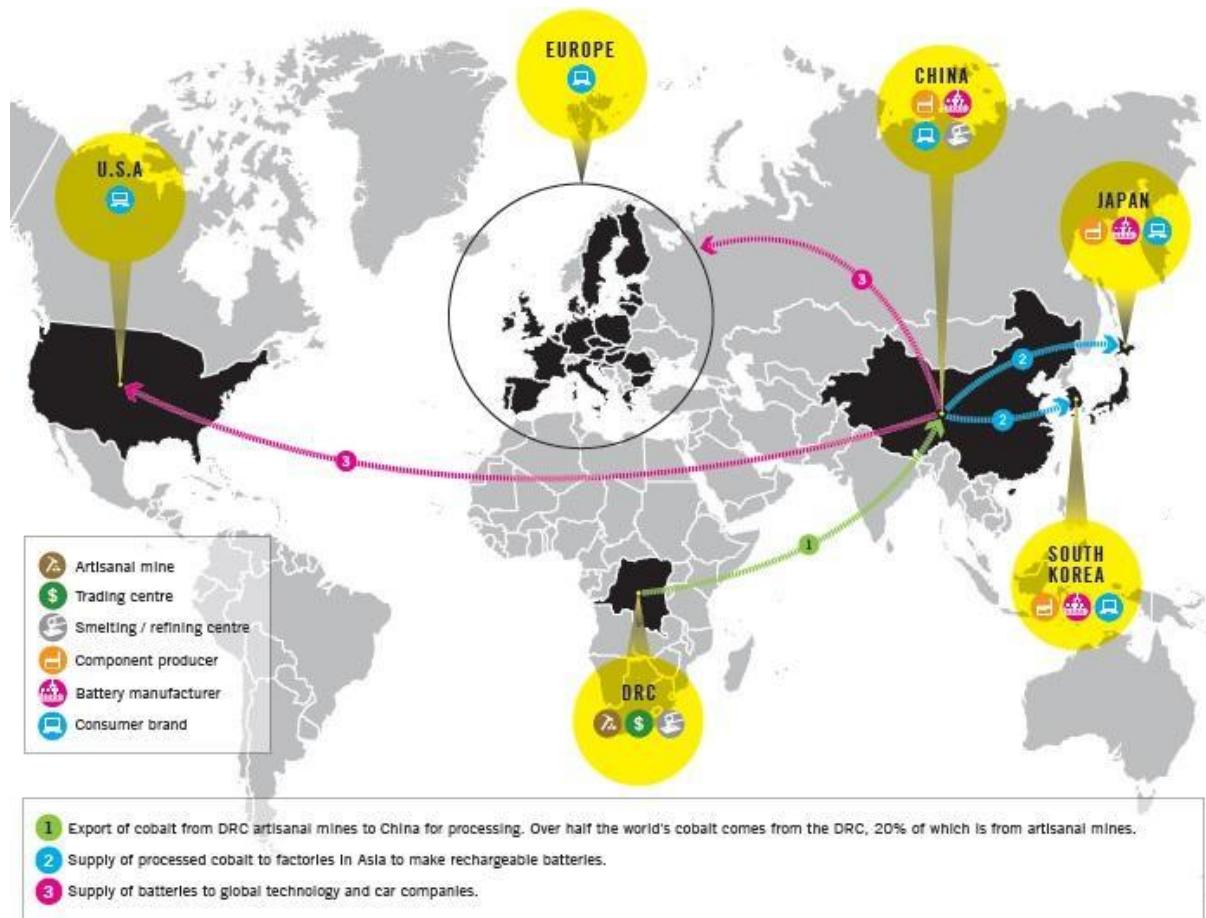


Figure 11 - Global cobalt supply from Katanga

Source: Amnesty International, 2016:46.

What Figure 10 fails to depict, however, is the dispossession, exploitation, environmental degradation, and the vulnerable children that are abused, just for developed countries to own “aesthetically pleasing, clean, high-tech gadgets we depend on their cobalt for”, as Sovacool (2021:290) remarks. The reality is that the electrification rate of the DRC is six percent, only twenty-six percent of the population has access to drinking water, life expectancy for women is 51 years and 47 years for men (Sovacool, 2021:272) – so the existence of an informal mining sector is only to be expected. The exploitative and irresponsible manner that cobalt is mined

from global supply has become synonymous with ‘modern slavery’ and ‘dispossession’, as Sovacool (2021:290) states. When interviewing the child miners in Katanga, Faber et al. (2017:53) stated that they work on the cobalt mines because they either want to contribute to their family’s income (32%), earn their own money (27%), or due to social pressure from their friends or communities (15%), and 6 % stated that they were forced into work (Faber et al., 2017:54), further painting the grim realities faced by child and adult artisanal cobalt miners.

#### 4.5. History of legislature and child mining of cobalt in the DRC

Cobalt mining is mostly prevalent in the most southern provinces of Lualaba and Haut-Katanga of the ‘Former Katanga’ province (Amnesty International, 2016:16) and the rise of artisanal mining of the mineral is connected to the state’s history of corruption and mismanagement of its mining enterprise, Gécamines, and the government’s failure to establish employment alternatives for the communities previously reliant on the state mining company (Amnesty International, 2016:16; Van den Brink et al., 2020:6). When reporting on “Cobalt mining in the DRC”, Amnesty International (2016:16) highlights that Gécamines was responsible for employing 34 000 workers, running farms, hospitals, schools, and contributed greatly to the economy when it functioned optimally between the 1970s and 1980s. With the fall of President Mobutu Sese Seko in the early 90s, it was not long until Gécamines reached the same fate, when they stopped paying the workers’ salaries and “looting its assets,” as Amnesty International (2016:16) reports. During the second war from 1998 to 2003, the successor to Mobutu’s presidency, Laurent Kabila, encouraged mining communities to dig minerals themselves, leading to what Amnesty International describes as “[t]housands of adults and children, using only hand tools, [to start] mining in the Gécamines concessions” (2016:16). Van den Brink et al. (2020:7) report that this raised the total artisanal production of cobalt in the DRC to 90 percent, and they argue this proves the competency of artisanal mining as an alternative, or supplement to the nation’s industrial supply. It was only after the Second Congo War that the government ratified new legislation aimed at boosting and reawakening the mining sector. The *DRC Mining Code of 2002* aimed to attract foreign investment and it succeeded because shortly thereafter, Western and Asian companies reinstated their mining operations in the industrial mines that were under Gécamines’ management (Amnesty International, 2016:17). Furthermore, in Article 14, the Code obligates the Directorate of Mines to inspect and monitor mining activities in the country, ensuring that operators are in line with health and safety regulations, occupational protocols such as transport and sales, and that social issues

relating to mining activities are addressed (DRC Mining Code, 2002; Amnesty International, 2016:35).

The *Mining Regulations of 2003* outlines regulations for artisanal mining, including environmental considerations for the mining sector (Amnesty International, 2016:35). However, Amnesty International (2016:35) strongly criticises these regulations as they only provide basic health and safety standards without detailing the provisions expected to address and ensure workers' rights. In 2002, the government ratified the Labour Code which stipulates the regulations on employee working hours, remuneration guidelines, age restrictions on labour, occupational health and safety standards, and the labour laws strictly prohibit the "worst forms of child labour," as Amnesty International (2016:35) reports. The ministry of Labour has the jurisdiction and mandate to inspect occupation sites, illicit or not, as part of Article 187 in the Labour Code (DRC Labour Code, 2002), however there has historically been insufficient personnel to undertake this task, and in 2014 the United States' Labour Department (DOL) found that there were only twenty labour inspectors responsible for overseeing all mining operations in Katanga (Amnesty International, 2016:36). This number was reported to have increased to two hundred in 2018 by the US DOL (2019a:6). However, in the same year, an overview of the law enforcement interventions targeting child labour conducted by the US DOL (2019a:5), found that these inspectors had not conducted the routine inspections they are authorised to do, nor did they have unannounced inspections at working sites, in the entire country. When conducting their interviews, Amnesty International (2016:36) was informed by an executive of a local NGO that labour inspectors prefer to focus on established mining operations, opposed to artisanal mining sites because it is more cost-effective and convenient since one inspector is responsible for an entire city. A lack of state resources and monitoring systems within the labour inspectorate have been reported to contribute to the rise of exploitation, and even child labour that is occurring in mines all over the DRC (Amnesty International, 2016:36; US DOL, 2019a:4).

This only solidifies what Van den Brink et al. (2020:9) highlight in their critique of the DRC's approach to developing their supply chain interventions, that "there is a weighted weak governance performance." Additionally, the DRC government does not monitor the health and safety conditions of child and adult cobalt artisanal miners (Amnesty International, 2016:23). Because these remote mining communities are considered to have 'temporary' status, they are then overlooked by public health officials because communities with a temporary status "do not usually qualify for public health facilities" (Hentschel, Hruschka & Priester, 2003:28). This

only further explains the poor health care and sanitation in Katanga – a phenomenon the Amnesty International (2016:23) has noted is common in artisanal mining areas. With children working up to twelve hours in the mines, without any protective gear like masks, they are exposed to high concentrations of radioactive cobalt, susceptible to various health complications; and the lack of access to public healthcare is a further violation of their human rights (Amnesty International, 2016:30).

Like most policies the Mining Code brought undesired consequences. While the renewal of industrial mining brought opportunities and promise for a better DRC, the industrial mining operations and their operators evicted artisanal miners from the old mining sites, sparking violent protests (Amnesty International, 2016:17). Another consequence following restructuring of the Gécamines in 2003 (with the support of the World Bank) was the unemployment of over 10 655 workers – many of them were then forced into the informal mining sector and then subsequently became artisanal miners (Amnesty International, 2016:17).

The DRC has ratified several international conventions including important ones of the ILO and the UN, as tabled below (Table 6). For the artisanal mining of cobalt by children the most important or condemning, is the Minimum Age Convention No.138, Worst Forms of Child Labour (No. 182), and the UN’s Convention on the Rights of the Child (CRC), as stated by the US DOL (2019a:3).




Organisation	Convention
	ILO C. 138, Minimum Age
	ILO C. 182, Worst Forms of Child Labor
	UN CRC
	UN CRC Optional Protocol on Armed Conflict
	UN CRC Optional Protocol on the Sale of Children, Child Prostitution and Child Pornography
	Palermo Protocol on Trafficking in Persons

Table 6 - International Conventions ratified in the DRC

Source: US DOL (2019a:3)

A 2019 report on the *worst forms of child labour* by the US DOL (2019a:4) details the laws and regulations on child labour in the DRC, and states whether the respective regulations fulfil the international standard and associated domestic legislation. The existence of child mining in



the Katanga province is contrary to the Child Protection Code of 2009 of the DRC. Articles 50, 53, 187 and 194 are directly contravened (minimum age of work, prohibition of forced labour, prohibition of children engaging in illegal activities, as examples), as reported by the DOL (2019a:4). Table 8 provides an exhaustive list (see Appendix E). The Service d'Assistance et d'Encadrement du Small-Scale Mining (SAESSCAM) was established in 1999 by President Kabila to function as a state agency that regulates and taxes the growing sector of artisanal mining (Amnesty International, 2016:16). The roles of the SAESSCAM with regards to enforcing legislation on artisanal mining are listed by the Amnesty International (2016:36) as follows:

- Training, and providing technical and monetary assistance to miners.
- Monitoring supply chain of materials from the mines to the buying houses.
- Collecting “after-sales” tax.
- Encourage and facilitate the establishment of miners’ cooperatives.
- Offer guidance on how security on artisanal mines can be maintained and supervise the implementation thereof.

Since its inception, the SAESSCAM has been failing to not only protect and train artisanal miners, but also ensuring that children do not engage in labour, especially the *worst forms*, that cobalt mining falls under. By regulating artisanal mines, the SAESSCAM has failed to enforce the prohibition of children (younger than 18) on sites, as stipulated in Article 23 of the *Mining Code of 2002* (Amnesty International, 2016:37).

#### 4.6. Role of the electronics industry

When conducting their research into the cobalt supply chain in former Katanga, in a joint project with AfreWatch,<sup>15</sup> Amnesty International (2016:47) identified Congo Dongfang Mining International SARL (CDM) as the largest buyer of cobalt from the licensed cobalt trading houses in the DRC. CDM is a subsidiary of Zhejiang Huayou Cobalt Company Ltd (Huayou Cobalt) – this company is based in China and is one of the world’s biggest manufacturers of cobalt products (Amnesty International, 2016:47). Before the cobalt is exported to Huayou Cobalt in China, CDM smelts and processes the ore, and one of their operations is the one located in Kolwezi – a mining town in the former Katanga that is built

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<sup>15</sup> AfreWatch or *African Resources Watch*, is an DRC-based non-governmental organisation dedicated to investigating human rights violations in the “natural resources sector,” and provides support to communities impacted by large-scale mining operations (Amnesty International, 2016:12).

around industrial copper and cobalt mines (Amnesty International, 2016:19). Once it reaches Huayou Cobalt in Zhejiang, China, the company then manufactures products such as rechargeable lithium-ion batteries that are used in smartphones, laptops, and electric cars. These cobalt products are then sold to manufacturers in China as well as South Korea to “battery component manufacturers” that then supply consumer brands such as Samsung, Apple, Dell, Volkswagen Huawei, Microsoft, and Lenovo, as evidenced in Figure 12 (Amnesty International, 2016:55).

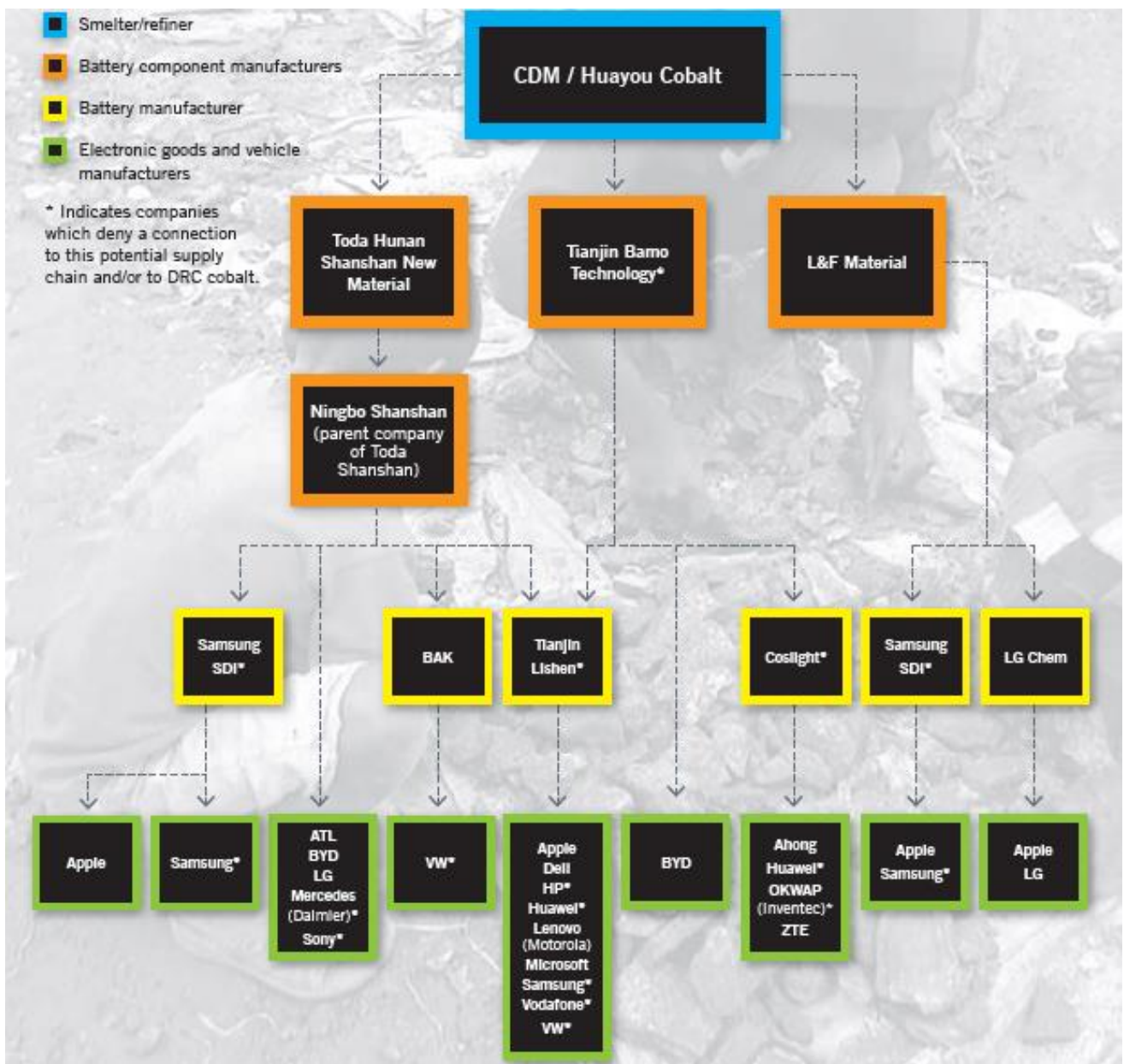


Figure 12 - CDM's supply chain

Source: Amnesty International, 2016:55.

A typical artisanal cobalt mine consists of about 1000 workers that live within a seven-kilometre radius from the mining site, which is situated on either an abandoned industrial site or informal artisanal site (ZEA),<sup>16</sup> as Faber et al., (2017:51), explain. To work on these mines, workers are sometimes obligated to pay a monthly entry fee of about US \$1.40, and some mines reportedly have a selling tax of US \$0.15 per kilogram of cobalt output – applicable to the children too (Faber et al., 2017:51). With child miners making about US \$1 to \$ 2, a day and having transport costs on top of that, the levels of exploitation are deplorable. These miners do not have any organised associations or cooperatives, so there is no general practice of a ‘labour union’, which leans into why artisanal miners have historically held no “bargaining power” – with only 2.5 percent of the mines Faber et al. (2017:52) surveyed reporting to have a union.

In their field interviews to compile their report *Child Miners Speak*, World Vision (2013:17) reported in June 2012 that child miners in Kambove range from ages nine to seventeen, and their tasks on the mines include digging the ore out of the tunnels, gathering the rocks with cobalt, transporting, washing, and sorting of cobalt. Although researchers reported sighting infants and toddlers on the mining sites, these children did not engage in work – they were merely present because their parents cannot afford child-care options such as crèches and babysitters (World Vision, 2013:18).

## 4.7. Stakeholder response in cobalt supply chain

### 4.7.1. DRC government regulation and policy frameworks in action

In 2019 a new governmental decree established a new subsidiary of Gécamines – *Entreprise Générale du Cobalt* – with special authority to purchase and sell strategic minerals that are mined by artisans and children, so to “ensure price stability and fairness by removing unregulated middlemen from the supply chain,” and ultimately reduce child mining (US DOL, 2019a:5). The *Entreprise*, however, is not responsible for overseeing the supply chain of these strategic minerals, enforcing regulation and implementing strategies to ensure children and vulnerable groups do not work on mines (US DOL, 2019a:5). This deference of responsibility can lead to monitoring and enforcement issues, which the state recognised, when examining the labour law enforcement agencies and their effectiveness. The US DOL (2019a:5) states that the government departments with labour law enforcement mandates are: the Ministry of Employment, Labour and Social Welfare (MOL); the Ministry of Justice and Human Rights

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<sup>16</sup> Zones d’Exploitation Artisanale or Artisanal Mining Zones.

(MOJ); the Ministry of the Interior; the Office of the President's Personal Representative on Sexual Violence and Child Recruitment; the Ministry of Defence (MOD); and the Ministry of Gender and Family (MOGF). Between these agencies, their roles vary from investigating cases relating to child labour, especially in its worst forms (MOL), enforcing criminal laws where child labour is of concern (MOJ), to supervising and investigating cases with children that are linked to commercial sexual exploitation (MOGF), as reported by the US DOL (2019a:5).

The presence of armed security enforcement at the mines, especially without a mandate of being there makes the threat of violence and danger constant. While all mines ought to have protection from the Mine Police – according to government policy, not all of them do, as those that are present are corrupt (Faber et al., 2017:52). Instead of all mines receiving protection from the Mine Police, only 49 percent of artisanal mines in Katanga do, and in addition to this, 30 percent of mines utilise private security (mainly industrial) – while only 16 percent of artisanal mines are protected by the Congolese National Police (Faber et al., 2017:52). There are some mines that are secured by the presidential guard as well as the governments' secret service, agencies with no security mandate over artisanal mines, yet they are present and force miners to pay rent in a manner that Faber et al. (2017:52) describes as “predatory.”

The DRC government has launched some mechanism and programmes to address child labour and more importantly, child mining. The MOL launched the National Committee to Combat the Worst Forms of Child Labour (NCCL) to monitor the National Action Plan aimed at the worst forms of child labour, and to monitor its enactment, with advice from UNICEF (US DOL, 2019a:8-9). The NCCL is a joint committee formed by representatives from other ministries, local NGOs, and civilians. In 2019 they convened a meeting that oversaw adoption of the USDOL Combatting Child Labor in the DRC's Cobalt Industry – a joint project with the US DOL (US DOL, 2019a:8). Another programme that was launched to eradicate child labour was the Inter-ministerial Commission Responsible for Addressing the Issue of Child Labour in Mines and on Mine Sites in the DRC, which acts as an advisory board for other government departments concerned with combating child mining (US DOL, 2019a:8). By the time the US Department of Labour published their report, the NCCL had not implemented any of their government programmes because of “lack of funding” (2019a:9). It is disappointing to note that the DRC government can only begin to implement social programs to reduce child mining in Kolwezi, Lualaba Province with foreign assistance, because only after a US \$2.5 million project by the US DOL and the ILO was established in 2018, the NCCL was able to report progress on the social programmes that were supposed to be implemented (2019a:10). While

this is the responsibility of multilateral international agencies, the DRC government is not being encouraged to employ their own regulations and establish standards and programmes sustainable to their local context.

## 4.7.2. Multinational Companies

### 4.7.2.1. Cobalt for Development

In 2019 BMW, BASF, Samsung SDI and Samsung Electronics (see Figure 12) and other international big tech companies established the Cobalt for Development initiative (Lawson, 2021). The initiative aims to increase support for ethical and safe working conditions, and standards in the cobalt mining industry of the DRC. It was only in 2020 that Volkswagen joined the initiative after international pressure to ensure that it also fulfils sustainability within the artisanal cobalt mining sector (Lawson, 2021). The initiative is scheduled to run for a three-year incubation period so that there is time to investigate and analyse how the miners' social setting and working environment can be improved (Lawson, 2021). Part of the initiative's data collection involves seeking input from local communities as a way to ensure that the initiative is sustainable for the long-term, and also create a sense of community ownership for the locals. Lawson (2021) states that thus far, Cobalt for Development has instituted programs and activities that have benefited over 1 800 community members. These programs include education workshops that range from "bread-making to women's rights, positive parenting, and conflict resolution" (Lawson, 2021). According to Krummel and Siegfried (2021:197), the project is functional in a couple of mining districts in Katanga's artisanal cobalt mines and aims to invest and develop its local community infrastructure. Together with the DRC's revised Mining Code of 2018 (previously 2002) and other regulations, NGOs and other corporations, Samsung believes that the long-term success of the project is feasible and sustainable (Krummel & Siegfried, 2021:197).

### 4.7.2.2. Fair Cobalt Alliance

The Fair Cobalt Alliance is an initiative that was launched in 2020 by Fairphone, Signify and Huayou Cobalt and it is managed by the international organisation: Impact Facility (Impact Facility, 2021). The initiative seeks to improve the working conditions of artisanal miners and end child labour in the DRC's cobalt mines (Lawson, 2021). By joining the Alliance, car manufacturing and mining companies guarantee their customers that their products are sourced and processed, under the international standard safety guidelines (Lawson, 2021). Tesla and mining company, Glencore, for example, are two companies that have joined the Alliance (Lawson, 2020). Early in 2021 Tesla announced that the company will be initiating a

“blockchain program” that will trace cobalt from when it is mined to when it is used in a consumer end-product so that the tech company can account for its supply chain, as Lawson (2021) reports. However, due to the rise in international outrage at the cobalt child miners, several tech companies have made the decision to cease buying from small-scale miners altogether. Lawson (2021) remarks this can have a negative effect on the incomes of the mining communities of the DRC who are dependent on this sector. Furthermore, with artisanal cobalt mining generating 20% of Congo’s cobalt output, such drastic decisions actually undermine the attempts to formalise this industry (Lawson, 2021). Because of the initiative’s infancy, there are no programmes established, however, Fair Cobalt Alliance is focused on developing a child mining programme aimed at increasing school attendance by subsidising school fees for children that have been identified by partner community-based organisations (Carter & Sturmes, 2020:73). The Alliance also aims to provide “vocational training, offering them [child miners] a practical alternative to working in the mine” when the miners reach adulthood (18 years of age), as Cater and Sturmes (2020:74) explain.

#### 4.7.3. International advocacy groups

The ILO, UNICEF<sup>17</sup>, and OECD<sup>18</sup> are listed as institutions that have reported and researched the economics and feasibility of children mining for cobalt, since the DRC government ended its “effective monopoly on mineral extraction” after the Second war of the early 2000s (Faber et al., 2017:11). The Human Rights Watch (2016:11) reports that since the ILO is such a well-established institution with numerous conventions that are internationally- and legally-binding, it ought to take leadership to bring about more comprehensive and internationally binding human rights standards into global supply chain. The UN and OECD on the other hand, can only provide human rights responsibilities, and international business standards for multinational companies, but these are not legally-binding (HRW, 2016:11). Examples of such guidelines include the UN’s Guiding Principles on Business and Human Rights, and the OECD’s Guidelines for Multinational Enterprises (HRW, 2016:11; Amnesty International, 2016:40; Sovacool, 2021:290).

The UN Guiding Principles encourage companies to “implement clear policy” that is committed to upholding human rights in all their “relevant business functions,” as the Human Rights Watch (2016:11) reports. This implies that international companies are still mandated

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<sup>17</sup> United Nations Children’s Fund.

<sup>18</sup> Organisation for the Economic Co-operation and Development.

to have ‘safeguards’ or human rights due diligence measures instituted throughout their supply chains that enable them to “identify, mitigate and respond” to any threats posed to the human rights of workers (HRW, 2016:11). Considering this, Amnesty International (2016:40) contends that it is then the responsibility of multinational companies to report such failures when they occur in the artisanal cobalt mines of the DRC. The Congolese government lacks the necessary legislation, regulatory bodies and criminal enforcement agencies that support defending the human rights of artisanal cobalt child miners, and their communities (Amnesty International, 2016:40). Therefore, the responsibility then falls even more on companies to assist the government of the DRC to apply these guidelines and principles. This not only eases the regulatory load of the Congolese government, but also aids them in focussing their already limited resources on improving the nation’s human rights obligations (Amnesty International, 2016:40).

#### 4.8. Discussion and analysis

The DRC has taken notable actions to formalise its artisanal cobalt mines as a way of managing the sector due to the increasing international pressure, and Huayou Cobalt, Volkswagen, and Tesla have joined in helping the government ensure “ethical and safer practices” are upheld in the electronics industry (Lawson, 2021). However, the worrisome fact of the matter is that in the DRC the existing policies directed at the informal mining sector cannot be implemented or evaluated because the government does not have the capacity to implement them (Verbrugge & Besmanos, 2016:135).

The suggestions made by Verbrugge and Besmanos (2016:140) align with those proposed by the US DOL (2019a:11) for the DRC government to promote the eradication of child mining, and child labour as a whole. Firstly, the DRC government needs to ratify a law that extends the compulsory schooling age to that of the minimum age of employment because while the minimum age for work is sixteen, and that of hazardous work eighteen, that of compulsory schooling is only twelve years (US DOL, 2019a:4). In addition to this, enforcement efforts by government agencies need to be improved, and for this purpose the DRC government needs to improve its databases relating to child mining violations, increase funding for law enforcement agencies and the labour inspectorate, increase penalties for the worst forms of child labour, and ensure that the “security forces do not subject children to human rights violations” (US DOL, 2019a:11). This includes “extortion and physical abuse,” and if anyone is found guilty, they need to be held accountable (US DOL, 2019a:11). It is important to note a comment that is

made in the report that the DRC's military and judicial systems "lack the capacity and resources to investigate and prosecute child labor violations" (US DOL, 2019a:8). This makes me wonder where these additional resources are expected to come from.

Coordination between ministries will also need to improve so as to ensure that there is no duplication and redundancy in the projects aimed to address child mining; and to ensure that the already limited government resources are not further wasted (US DOL, 2019a:11). Together with this, the US DOL (2019a:11) suggests that government policies will need to be re-evaluated to ensure full implementation of all the relevant national plans and strategies to end child mining, so that they are "adopted, funded, and implemented as intended." Lastly, the US DOL (2019a:11) suggests that the DRC government increase its attention to social programmes and the implementation thereof. The suggestions that they propose for actions the DRC government should take in the area of social programmes are quoted as follows:

- Conduct a stand-alone child labor survey to inform child labor policies and practices.
- Improve access to education by ensuring that all children are registered at birth or are issued identification documents
- Improve access to education for all children by regulating classroom size, training additional teachers, building additional schools, and ensuring that schools are safe, and students are not subjected to sexual abuse or forcible recruitment while at or on their way to school. Make additional efforts to prevent schools from being attacked and occupied by armed groups.
- Expand efforts to address the needs of demobilised children and incorporate stigmatisation, gender, and re-recruitment concerns into programs to reintegrate such children.
- Establish or expand social programs designed to assist children engaged in forced labor in agriculture, street work, domestic work, and commercial sexual exploitation, and implement existing programs as intended. (US DOL, 2019a:11).

With comprehensive social programmes, hopefully no child in the DRC, and the globe should have to share the experience as that of Yanick Kalumbu Tshiwengu, a former cobalt child miner from Kolwezi that was interviewed by Gordon (2019).

Yanick started working on artisanal cobalt mines in Kolwezi when he was eleven years old where he had to work long hours digging ore out of the makeshift tunnels that are found in artisanal mines and had two near-death experiences – including a landslide that caused one of these makeshift shafts to collapse (Gordon, 2019). He has also been exposed to substance abuse on the mines, sniffing glue and petrol with his friends, which provide the necessary escape for the horrors they experienced daily. Gordon (2019) quotes Yanick as he recalls the hazardous



working conditions on the cobalt mines and the worst of the exploitation, fully articulating why the existence of child mining in Katanga, and inevitably in the entire global supply chain, makes everyone complicit and liable in the perpetuation of child cobalt mining, myself included:

“It was a living hell ... We saw things that no child should see. There was a culture of rape and violence. Girls often fell victim to rape, which as children we were powerless to prevent. Sometimes lives were lost for a few francs. No good can ever come from the mines and I'd like to see them all closed so no child has the same experience as me.”

Had it not been for intervention programmes run by Good Shepard International, Yanick would not have been in school, even though it is only as an adult, at eighteen years of age that he attended school (Gordon, 2019). Yanick's experience highlights the failure of supposed *Corporate Social Responsibility* policy interventions that multinational companies have adopted in their supply chains as part of their obligation to abide by due diligence standards.

Calvão et al. (2021:1) are highly critical of corporations encouraging formalising the artisanal cobalt mining sector because it creates room for companies to evade responsibility – because this is now placed in the miners' hands. They refer to this as an outsourcing of responsibility. The *corporate outsourcing of responsibility* is defined as the “shift” in responsibility and extraction risks to miners (Calvão et al., 2021). Despite efforts to formalise artisanal mining, the miners still face danger at mining sites. Mining companies want their operations secure, so they hire private security such as the Forces Alliances Republique Democratic Congo (FARDC), but in turn, they extort miners for entry fees even though they have permits (Calvão et al., 2021).

To conclude my analysis and discussion, we need to consider a study that was conducted by researchers from the *Center for Effective Global Action*, surveying artisanal mining communities at a large scale in the copper cobalt belt in the DRC (Faber et al., 2017:1). This survey was conducted in 150 mining communities, with over 2600 households, including 1575 children being some of the interviewed. When reporting on their findings, Faber et al. (2017:9) raised three points to address when it comes to the “implications for artisanal mining policy,” which I find extremely helpful for the purposes of my study, and are summarised below:

*Disengaging from artisanal mining has negative consequences on miners' welfare.*

When government institutions intervene to curb artisanal mining and more so, children mining cobalt, the households in these mining communities are put in a worse financial situation because there are limited income alternatives. Therefore, Faber et al. (2017:9), suggest that government policies and regulations be coupled with “income support” so that the livelihoods of these thousands of communities are not harmed.

*Collaborative efforts and sustained multi-stakeholder relationships can mitigate “unintended harm” from policy.*

In order to mitigate the financial insecurity some artisanal mining policies may pose to artisanal miners (adults and children), the policy interventions and programmes established by the DRC government should involve a multi-stakeholder approach, where relationships are formed and maintained at each level of the cobalt sourcing chain (Faber et al., 2017:9). These relationships need to be accompanied by incentives programmes and support that encourages communities and families to “voluntarily reduce child labor ... without putting livelihoods at risk,” as Faber et al. (2017:9) argue. Baumann-Pauly (2020), however, is sceptical of ASM formalisation because, while she recognises the need for stakeholders to establish a common ASM standard for mine safety, child mining, and responsible cobalt sourcing, she contends that there is no common understanding and consensus on what *ASM formalisation* is, and what is meant by *responsible* artisanal mining. I am in agreement with her because policy effectiveness can only be achieved once monitoring standards are set as a benchmark.

*Rigorous evaluation of intervention is needed before implementation.*

Child cobalt mining is a complex issue with high levels of risk and uncertainty, and because it impacts a vulnerable group of society, it is imperative that the intervention strategies are thoroughly evaluated to ensure maximum effectiveness (Faber et al., 2017:9). Such evaluations need to start at a smaller scale so that the impact of the strategies is understood and adjusted, before being implemented for larger populations (Faber et al., 2017:9). An example of this is the companies like Tesla and Glencore, as members of the Fair Cobalt Alliance, resorting to choosing to disinvest in small-scale mining (Lawson, 2021). The general point I am making here, is that there is not enough ongoing assessment and adjustment of the implementation of current policies aimed at cobalt child mining, and that this correlates with a lack of foresight analysis when such policies are designed.

## 4.9. Conclusion

Child mining in the DRC is a significant case to study because it is the only country that has a great supply of cobalt in reserves. The DRC has over sixty percent of global cobalt production, and the countries that also produce cobalt, do not have more than six percent of the global supply each (Banza Lubaba Nkulu, Haufroid, De Puffer, Saenen, Kayembe-Kitenge, Musa Obadia, Kyanika Wa Mukoma, Lunda Illunga, Nawrot, Luboya Numbi, Smolders, & Nemery, 2018:497). In 2018, researcher Caspar Rawls reported an expectation that the global output of cobalt from the DRC would increase to 75 percent (Sovacool, 2021:272), a completely reasonable summation in my opinion, given the fact that cobalt is vital in the manufacturing and production of low-carbon energy, especially the batteries needed for storing renewable energy, powering electric cars and solar panels (Sovacool, 2021:271). Lawson (2021), however, warns that the outrage and concern for the children working in cobalt mines ought not end at “online activism” but should translate to real world decisions and action. With that in mind, and the knowledge of how deplorable the situation is that artisanal cobalt miners, children included, face I am left to wonder whether a formalised small-scale mining sector is worth that 10g of cobalt in my cell phone’s battery, or 15kg in an electric car’s battery (Calvão et al., 2021:2). In the next and last chapter, I present my conclusions and overall recommendations from this study.

## Chapter 5: Conclusion and recommendations

### 5.1. Research background

This study has two guiding questions that constitute my problem statement: (1) Why is child labour still happening, and (2) What can be done to strengthen measures against child labour? The contributing factors to the existence of child labour in global supply chains were identified to be primarily: gaps in legislation, lack of enforcement and non-compliance; socio-economic factors around individuals and employees: and lastly, business conduct and working environment (ILO, 2019c:10), as I have shown in my introductory chapter and my two case studies on India and the DRC respectively. My literature review aimed to describe the ethical dimensions of child labour, and more specifically child mining. In the historical context of the industrial revolution in Britain and lessons learnt from contemporary China, the causes and/or determinants of child labour were identified as:

Size of household (Grootaert & Kanbur, 1995)

- i. Structure of the labour market (Grootaert & Kanbur, 1995; Edmonds, 2003)
- ii. Technology (Grootaert & Kanbur, 1995; Humphries, 2003)
- iii. Poverty (Edmonds, 2003)
- iv. Lack of education (Edmonds, 2003).

The case studies in India and the DRC aimed to offer a snapshot at the inescapable realities of child miners, and the artisanal small-scale mining operations that child miners are still a part of today. Chapter three and four offer the thesis' case studies, with chapter three devoted to child labour in India and chapter four focusing on child labour in the Democratic Republic of Congo (DRC).

In chapter 3 the main ideas are the critiquing of the exploitative practice of child mica mining as well as the multinational cosmetics industries that fuel and support this business, as well as the failures of policies and programmes that the Indian government formulated, but actually disregard when it comes to a lack of implementation. This chapter looked at the current practice of child mica mining in very poor provinces of India namely: Jharkhand and Bihar (O'Driscoll, 2017:5).

Mica or muscovite is the shiny mineral that is used in large industries such as the beauty, construction, automotive, medical and defence industries (Bliss, 2017:23; Bhalla et al., 2016; Makower, 2020). This once again shows the severe dependence of global corporations and

consumers on the illegal mica mining industry and the absolute disregard for the manner in which the mica that is mass produced in the industries mentioned above, is sourced. I also looked at the legislation, the regulatory framework, and the role of multinational companies in all of this, noting that while there is a general willingness to address the challenges of children mining mica, not much real-world changes have actually come from it. The other factor this thesis described in chapter 3 was the working conditions of the illegal child miners in the mica mines. It is clear that the conditions are hazardous and damaging to the illegal child miners in Jharkhand and Bihar. The compensation these illegal child miners receive is shocking and the intergenerational consequences of this exploitation are detrimental to these communities.

In this chapter I was met with the disregard from large industries as to how they source mica. In the supply chain (referring to the supply chain for chapter 3), these large companies do not directly get their mica from these illegal mines but rather from companies and manufacturers who buy and process the mica from these illegal mines. This is then how large companies ‘keep their hands clean’ and evade traceability and responsibility of ethically sourcing the mica. In chapter 3 it is obvious how horrible the working conditions as well as living conditions of the illegal miners are, but what stands out is how there are now real stories and information from the children themselves. It further shows how the children’s lives are so expendable and their livelihoods completely disregarded. This is a disheartening discovery that leads us to understand how deeply embedded and normalised child mining is in these poor parts of India.

In chapter 4 of the thesis, I discussed and analysed at the illegal child mining in the Katanga province in the DRC and the horrifying effects of the exploitation by not only the government but well-known multinational companies. In this chapter it is also seen the horrible living conditions these children live in and how common injury or fatality is. The exploitation runs deep, and the multinational corporations evade accountability by not obtaining cobalt directly from the illegal mines but from companies that buy cobalt from these miners at exploitative prices and process them to be used by big technology companies. The compensation the miners receive is shocking yet tolerated as these are the only options available to keep food on the table. Child miners endure fatal working conditions in Katanga Province to mine cobalt used in digital appliances such as computers, phones, batteries, electric vehicles, solar panels and fuel cells (Sovacool, 2021:290).

From this it is evident that not only is the environment of the DRC being exploited but several generations of child miners are being exploited as well. The industry benefiting from the

exploitation are multinational companies such as Apple, Dell, HP, Huawei, Samsung and Sony all of which produce electronic and digital devices of which cobalt is used for batteries and other parts of these devices (Sovacool, 2021:271; Amnesty International, 2016:9). Only very recently was the exploitation happening in the DRC brought to light after large companies such as Apple, Dell, Microsoft and Tesla were mentioned in a case suing for death and injury caused to these illegal child miners, highlighting the horrible working conditions. This then led to further studies, including that of Amnesty International (2016) that show examples of the exploitation from MNCs and the effects this exploitation has not only on the underage miners but on countries' economies.

Against this background, this chapter will aim to provide recommendations to the problem I have identified in the introduction as well as throughout the case studies, and I will also articulate themes for further research. This chapter also includes recommendations and suggestions to the reader, governments, and large industries to act responsibly, and intentionally work towards ethical mining to improve the conditions of the children involved in the grave injustice of child labour.

## 5.2. Study methodology

This study is based around non empirical research – meaning I intentionally looked at theoretical data. Non empirical research aims to understand the logic that underlies certain processes (Babbie, 2010:394), which makes sense when looking at the topic I researched. I strategically consulted many peer-reviewed articles, books as well as journalistic works and reports from different activist groups. I took the approach of looking at literature that gives us more insight to the historical context of child mining as well as religious text relating to modern day slavery. This helped me to understand how deeply embedded child labour is in the communities looked at in the case studies, namely India and the DRC, and gave me a broader perspective of the many contributing factors that led these children to illegal mining and underage labour. In both chapter three and four I have taken the exact same approach in order to ensure both case studies are thoroughly studied and looked at. The specific structure of each case study went as follows:

- (i) The historical context of mining
- (ii) The introduction of children in mining
- (iii) Policy and legislative frameworks will be analysed
- (iv) The social, economic, and political aspects in their relation to mining communities

(v) Intervention strategies and shortcomings of respective stakeholders

Following this structure helped me to compare the case studies and helped with providing enough context and background information to draw the conclusions I formed, and to identify the causes and effects of these very damaging illegal industries. This structure also forced me to engage with the many different arguments and frameworks giving me a firm base of knowledge on which to discuss and provide sustainable and relevant recommendations throughout this thesis. The approach I took has helped me to locate the causes of which it is easy to compare chapter 3 and 4 case studies and see that the poverty and lack of access runs further than just this generation of miners. In both case studies it is evident that the exploitation and misuse of government power and resources have a significant impact on several generations. In both chapter 3 and 4 child mining and underage labour very clearly falls by the wayside and has only been seen as a threat after injury and loss of life has occurred which once again highlights how these children's lives are disposable and their human rights and dignity treated as if it was an option. It is clear when reflecting on the results and recommendations made in chapters 3 and 4, I was able to see how in both India and DRC the lack of policies aimed at protecting and bettering the lives of citizens have fallen by the wayside as governments struggle to recover from colonial rule and the devastating effects left behind from this horrible power dynamic. Governments and citizens alike have had to fend for themselves and create opportunities for themselves as a means to survive. The colonial rule India and the DRC have found themselves under has had damaging effects on governments and left governments entrapped by corruption, leading to an even more detrimental impact on the citizens and most vulnerable of the India and the DRC.

### 5.3. Findings and recommendations

The case studies of India and the DRC both reveal the countries' history of colonial rule, the British and the Belgians, respectively. Both my case studies revealed that the respective states were left with a legacy of poor governance; lack of access to resources and infrastructure; generations pained by injustices and discrimination; and impoverished communities, yet both India and the DRC are bountiful in economic minerals. Both India and the DRC share similar factors that contribute to the existence of child labour however while the majority of the Indian population is educated, much of the DRC is not and this is exemplified by its high illiteracy rates. What I found interesting when interrogating the reasons child miners listed as motivation for them seeking employment differed in India opposed to the DRC. The mica child miners

that were interviewed in Jharkhand/Bihar were cited to much rather be enrolled in school whereas in Katanga the cobalt child miners preferred to be engaged in work. Just this slight difference illustrates that the needs of child labourers vary according to context. When comparing the suggested policy interventions by multilateral institutions such as the ILO and the UN, it is evident that flexible schooling and work/study programs would be more effective in the DRC as opposed to compulsory schooling legislation that would be more beneficial in India. This is an important point that I am making because both these countries have ratified the same Conventions and have thus far applied the suggested *universal* approach that the ILO and OECD have suggested and have failed to adequately eradicate and curb child labour. This furthermore emphasises why the voices of indigenous knowledge and the practical skillset of community members is a necessity in a multistakeholder operation such as the international mining sector.

Given these shortfalls in policy implementation, I as a novice researcher am concerned because I foresee the trend of multinational corporations continuing to flock to other mineral rich developing countries with resources that are viewed as being ‘renewable’, ‘sustainable’, and ‘natural’ resources that are still exploitative and harmful to the environment. Mining communities and the children that live in these communities are a significant part of the environment and disregarding this is yet another display of consoling and privileging rich consumers’ guilt, because mica has been labelled as a natural mineral source yet what is natural about exploiting children.

As part of my recommendations, I have chosen to incorporate aspects I have identified in my discussion of stakeholder responses and case study analyses for India and the DRC, respectively. To cement the case for a context-specific approach I furthermore base my recommendations on the theoretical frameworks offered by O’Driscoll (2017), Garg (1999) and Edmonds (2007), the research findings of the Center for Effective Global Action as stated by Faber et al. (2017), and implementation of initiatives such as: the Jharkhand Sustainable Mica Policy Framework (RMI, 2020), Cobalt for Development (Lawson, 2021) and the Fair Cobalt Alliance (Lawson, 2021).

1. Child miners and affected community members need to be an active part of decision-making on measures to eradicate child labour in mining (Cobalt for Development).
2. The sustainability of programs and services is reliant on the improvement of the lives of communities and children currently affected by child mining, and this could be



achieved by having educational workshops, subsidised schooling, training programs, and the development of local infrastructure (Jharkhand Framework, Cobalt for Development, CEGA).

3. Activism is important and local organisations and NGOs are a necessary voice in ending child labour, as evidenced by BBA's "Child-friendly Village" (Jharkhand Policy Framework).
4. There needs to be a multi-stakeholder commitment to ethical and safe working conditions and the supply chain of minerals needs to be transparent (CEGA, Fair Cobalt Alliance).
5. Lastly, for effective policy implementation and human rights fulfilment, states and international authorities that provide guidelines need to ensure that monitoring and compliance measures are applied to ensure ethical business standards, with a view to make sure that a context-specific approach succeeds.

#### 5.4. Closing remarks

When I came across Kana (2018) my initial reaction was disappointment because her voice as a Stanford lecturer writing for *The Guardian* is what led to international uproar at the working conditions and lived realities of the cobalt ASM sector and the heavy weight this mineral bears on children when Amnesty International (2016) had already published a detailed fuel study in Katanga. However, I now realise as part of staying true to this study's objective of seeking an interdisciplinary and multi-stakeholder approach to awareness-raising, accountability, and traceable supply chains, that different voices are needed to appeal to different sectors to assisting holding MNCs to best practice standards. I guess the age-old principle of "What will people say?" does instil a conscience and this study seeks to be the conscience that advocates for reflexive policy frameworks, due diligence monitoring and constantly reevaluating the supply chain, living, and working conditions and community needs in the artisanal small scale mining sector. As the metaphorical sun 'sets' on the ethical, socio-political, economic, and environmental 'landscape' of child mining, this is now where we gather at the watering hole to debrief on the journey traversed together in this story. Are you ready to assist in raising awareness and accountability regarding child labour in the mining sector now that this study has unveiled all these painful truths that we as end-product consumers are complicit in? Please be advised: while I have led you to this watering hole, I cannot force you to drink, as that would be unjust and unethical. You have to make your own choices, rather, knowing now to some

extent what millions of child miners know and have lived through in order for you to read these words in the comfort of your home, your study, or your university.

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## **Appendices**

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## Appendix A

Mineral/commodity	Name	Organisation	Type	Social requirements	Environmental requirements	Economic requirements
Diamonds	Kimberley Process Certification Scheme	Kimberley Process	Certification	X (Conflict-free)		
3 TG	Responsible Minerals Assurance Process (former Conflict-Free Smelter Programme)	Responsible Minerals Initiative	Assurance	X (Conflict-free)		
3T	International Tin Supply Chain Initiative	International Tin Research Institute	Traceability initiative	X		X
3 TG	Regional Certification Mechanism	International Conference on the Great Lakes Region	Certification	X		X
Diamonds	Development Diamonds Standards (Maendeleo Diamond Standards)	Diamond Development Initiative International	Programme/Standard	X	X	X
All mineral resources	Standard for Responsible Mining	Initiative for Responsible Mining Assurance	Standard	X	X	X
All mineral resources	Responsible Mining Index	Responsible Mining Index	Index	X	X	X
3T	Certified Trading Chains Programme	Bundesanstalt für Geowissenschaften und Rohstoffe	Certification	X	X	X
Coal	Bettercoal Code	Bettercoal Initiative	Standard	X	X	X
Aluminium	Aluminium Stewardship Initiative	Aluminium Stewardship Initiative	Standard	X	X	X
Steel	Responsible Steel Stewardship	Australian Steel Stewardship Forum	Standard	X	X	X
Diamonds, gold and platinum group metals	RJC Certification	Responsible Jewellery Council	Certification	X	X	X
Gold	Fairmined Standard	Alliance for Responsible Mining with Fairtrade Foundation	Standard	X	X	X
Natural stone	Fair Stone	Fair Stone e.V.	Standard	X	X	X
Natural stone	XertifiX Criteria	XertifiX e.V.	Standard/ Certification	X	X	X

Table 7 - Summary of Sustainability Schemes

Source: van den Brink, 2019: 3

## Appendix B

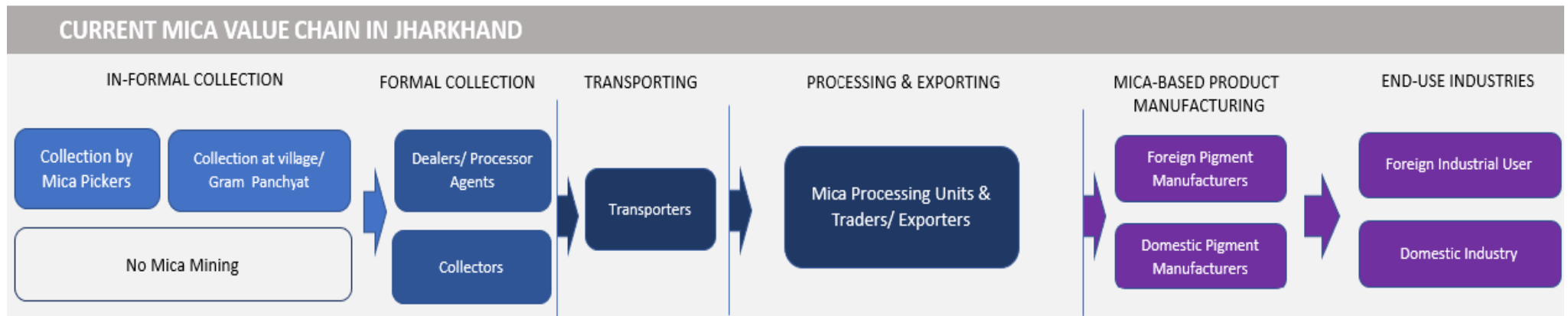


Figure 13 - Summary of Framework Recommendations

Source: RMI, 2020

## Appendix C

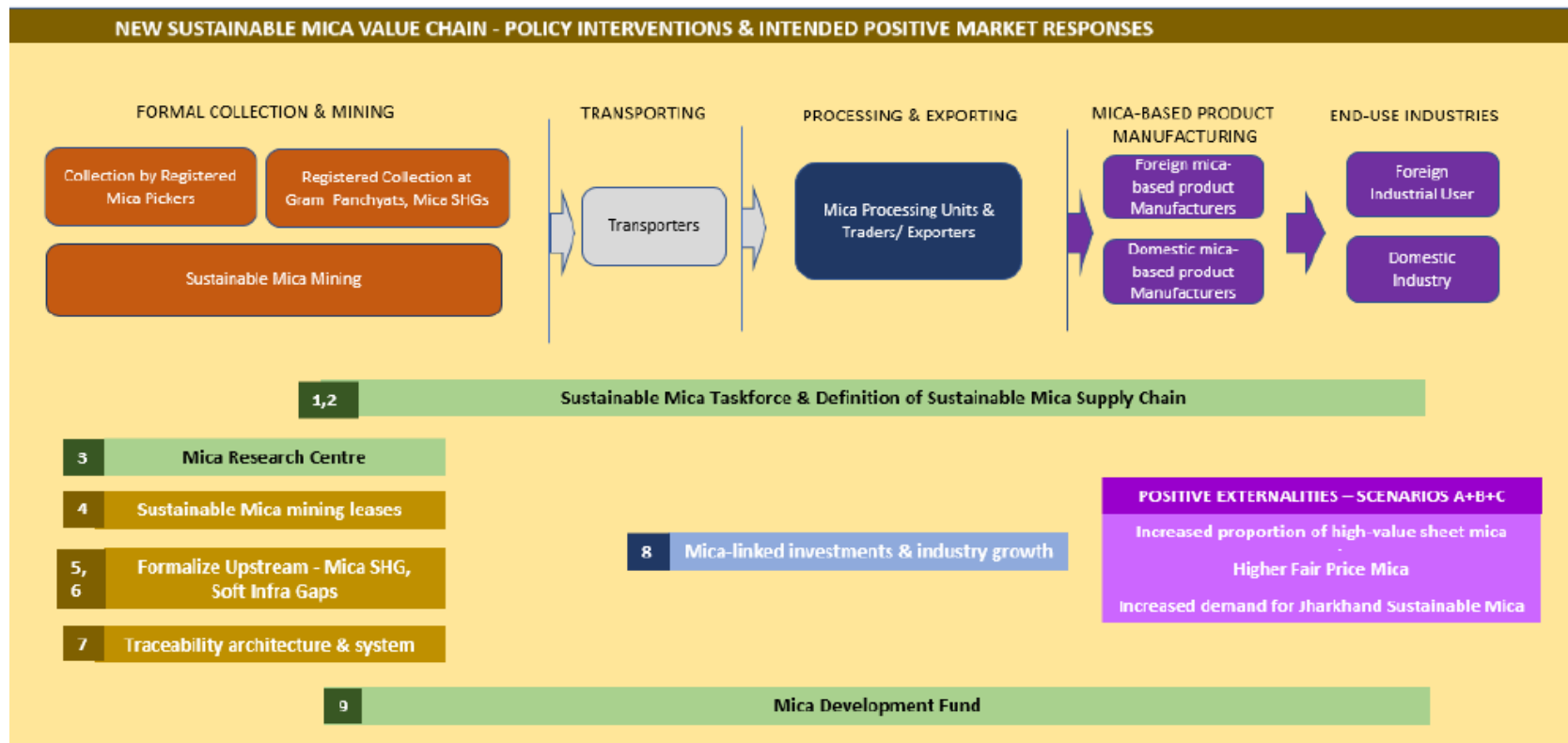


Figure 14 - Sustainable Mica Supply Chain

Source: RMI, 2020

## Appendix D



Figure 15 - Cobalt global supply chain.

Source: Amnesty International, 2016:47.

## Appendix E

Standard	Meets International Standards	Age	Legislation
Minimum Age for Work	Yes	16	Article 6 of the Labor Code; Article 50 of the Child Protection Code (50-52)
Minimum Age for Hazardous Work	Yes	18	Article 10 of the Decree Establishing the Conditions for Children's Work (53)
Identification of Hazardous Occupations or Activities Prohibited for Children	Yes		Articles 8–15 of the Decree Establishing the Conditions for Children's Work; Articles 26 and 299 bis of the Mining Code; Article 8b of the Decree on Validation Procedures for Artisanal Mines; Article 125 of the Labor Code (51,53-56)
Prohibition of Forced Labor	Yes		Articles 2 and 3 of the Labor Code; Articles 53 and 187 of the Child Protection Code; Articles 16 and 61 of the Constitution; Article 8 of the Decree Establishing the Conditions for Children's Work (51-53, 57)
Prohibition of Child Trafficking	Yes		Article 3 of the Labor Code; Articles 53, 162, and 187 of the Child Protection Code; Article 174j of the Penal Code; Article 8 of the Decree Establishing the Conditions for Children's Work (50-52,55)
Prohibition of Commercial Sexual Exploitation of Children	Yes		Article 3 of the Labor Code; Articles 53, 61, 169, 173, 179–180, 182–183, and 187 of the Child Protection Code; Articles 174b, 174j, 174m, and 174n of the Penal Code; Article 8 of the Decree Establishing the Conditions for Children's Work (50-53)
Prohibition of Using Children in Illicit Activities	Yes		Article 3 of the Labor Code; Article 8 of the Decree Establishing the Conditions for Children's Work; Articles 53, 187–188, and 194 of the Child Protection Code (51-53)
Minimum Age for Voluntary State Military Recruitment	Yes	18	Article 27 of the Law on Armed Forces; Articles 53, 71, and 187 of the Child Protection Code (51,58)
Prohibition of Compulsory Recruitment of Children by (State) Military	Yes*		Article 7 of the Law on Armed Forces; Article 27 of the Law on the Military Status of the Congolese Armed Forces; Articles 53, 71, and 187 of the Child Protection Code (51,58,59)
Prohibition of Military Recruitment by Non-state Armed Groups	Yes		Articles 53, 71, and 187 of the Child Protection Code; Article 190 of the Constitution (51,57)
Compulsory Education Age	No	12‡	Article 38 of the Child Protection Code; Articles 7,21, 12, and 72 of the Law on National Education; Article 43 of the Constitution (51,57,60)
Free Public Education	Yes		Article 38 of the Child Protection Code; Article 43 of the Constitution; Articles 12 and 72 of the Law on National Education (51,57,61)

Table 8 - Legislation and regulation on child labour in the DRC

Source: US DOL, 2019:4.