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Driving Change in the Democratic Republic of Congo

An initial mapping of participation in mineral regulation and responsible sourcing

Sarah **Katz-Lavigne**
Hadassah **Arian**
Raphaël **Deberdt**
Sara **Geenen**

University of Antwerp
IOB | Institute of Development Policy

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Institute of Development Policy

Postal address:
Prinsstraat 13
B-2000 Antwerpen
Belgium

Visiting address:
Lange Sint-Annastraat 7
B-2000 Antwerpen
Belgium

Tel: +32 (0)3 265 57 70
Fax: +32 (0)3 265 57 71
e-mail: iob@uantwerp.be
http://www.uantwerp.be/iob

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Sarah Katz-Lavigne*
Hadassah Arian**
Raphaël Deberdt***
Sara Geenen*

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* Institute of Development Policy (IOB), University of Antwerp, Belgium | Centre d'Expertise en Gestion Minière (CEGEMI), Université Catholique de Bukavu, DRCongo. sarah.katz-lavigne@uantwerpen.be

** Institute of Development Policy (IOB), University of Antwerp, Belgium.

*** University of British Columbia, Canada | Centre d'Expertise en Gestion Minière (CEGEMI), Université Catholique de Bukavu, DRCongo.

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Abstract

Ethical supply chain initiatives, such as mandatory human rights due diligence (mHRDD) and responsible sourcing initiatives for minerals, are rapidly multiplying. The Democratic Republic of the Congo, faced with violent conflict and a range of human rights issues, has grown into a laboratory for such initiatives, to an extent that it has become difficult to see the forest for the trees. In this working paper, we make an attempt at providing a comprehensive – though inevitably incomplete – overview of initiatives, programmes, and projects (past, present, and upcoming) that have been created by actors at different levels of the supply chains in response to growing concerns around Congolese minerals. More specifically, these measures relate, first, to the 3Ts (tin, tantalum, tungsten) and gold, extracted in particular in the conflict-affected eastern provinces and second, the more recent booming demand for copper and cobalt (2C) from the provinces of Haut-Katanga and Lualaba in southeastern DRC. With a theoretical focus on participation, this working paper lays the groundwork for further research on the participation of small-scale producers in the design, implementation, and governance of transnational mineral supply chain initiatives.

Regulating mineral supply chains

The idea that businesses active in so-called "developing" countries were not responsible for the outcomes of their investment in these countries was increasingly scrutinized and critiqued starting in the late 1980s. This was to a significant degree the result of the increasing amount of evidence, linked to individual firms, of human rights abuses, pollution, and other negative outcomes for development. By the end of the 20th century and beginning of the 21st a diverse range of multinational firms had agreed to adhere to voluntary codes of practice. The 1990s and early 2000s saw the creation of a number of voluntary governance initiatives focused on "developing" countries, which amounted to a noteworthy new aspect of the governance of value chains, and one that persists today (Blowfield & Dolan, 2014, p. 24). Private regulatory governance, which Bloomfield and Manchanda (2023, p. 2) define as "industry self-regulation and various forms of transnational, multi-stakeholder, and corporate social responsibility (CSR) initiatives" has become prominent as a response to environmental and social concerns that have arisen across different industries (ibid).

In line with these developments, ethical supply chain initiatives, such as mandatory human rights due diligence (mHRDD) and responsible sourcing initiatives for minerals, are rapidly multiplying. Recent years have seen the emergence of a "new global foreign accountability norm" (Partzsch & Vlaskamp, 2016). In the European Union, 2021 legislation makes it a requirement for corporations to undertake human rights and environmental due diligence for minerals from so-called "conflict-affected and high-risk areas" (CAHRAs). **Conflict-affected and high-risk areas (CAHRAs)** are "identified by the presence of armed conflict, widespread violence or other risks of harm to people [...] High-risk areas may include areas of political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure and widespread violence. Such areas are often characterized by widespread human rights abuses and violations of national or international law." (OECD, 2016a, p. 13) The European Union regulation followed the establishment of "conflict minerals" legislation in the United States in 2010 which specifically targeted one CAHRA, namely the Democratic Republic of Congo. In the wake of these developments, numerous initiatives have been set up to help corporations comply with applicable legislation and mitigate negative human rights, environmental or labour impacts along their supply chains. In fact, these initiatives have multiplied to an extent that it has become difficult to see the forest for the trees.

In this paper, we make an attempt at providing a comprehensive – though inevitably incomplete – overview of initiatives, programmes, and projects (past, present, and upcoming) that have been created by actors at different levels of the supply chains in response to growing concerns around Congolese minerals. More specifically, these measures relate, first, to the 3Ts (tin, tantalum, tungsten) and gold, extracted in particular in the conflict-affected eastern provinces and second, the more recent booming demand for

copper and cobalt (2C) from the provinces of Haut-Katanga and Lualaba in southeastern DRC.

The DRC and its vast mineral resources – highly sought after on international markets for electronic consumer goods like mobile phones and laptops and, more recently, electric vehicles – have been the epicentre and inspiration for many of these programmes and initiatives in recent years. These developments reflect the widespread belief in policymaking circles that "the DRC has the lowest levels of governance and the highest risk of conflict, child labour and forced labour." (Mancini et al., 2020, p. 26). Although only partially true and overly sensational, such narratives have turned the DRC into a "laboratory" for ethical supply chain initiatives (Autesserre, 2012). As we point out later in this paper, the impact on the ground – in terms of reducing conflict and human rights violations – has been ambiguous. Yet this paper's aim is less to evaluate the impact on the ground, and more to describe and categorize the different initiatives to lay the groundwork for further research on the participation of small-scale producers in the design, implementation, and governance of transnational initiatives, in the context of the FWO (Research Foundation Flanders) project "Driving Change: Putting small-scale producers in the driver's seat of battery-mineral supply chain regulation". Small-scale producers are all those, female and male, who are directly involved in the mineral supply chain, which includes different categories of workers in the mine, pit owners/managers, traders, cooperatives, local smelters, transporters, etc. "Production" in this sense refers to the different stages that minerals go through before they leave the country: mainly extraction, processing, sale, and refining. In order to do so, we must examine if and how, to date, different initiatives have conceived of and implemented measures to encourage participation by those involved in mineral production at the upstream level. Therefore, our analysis will focus on the question of whether and how the ethical supply chain initiatives under discussion implement the dimensions of transparency, accountability, and participation.

For this review we have consulted both academic and "grey" literature (University of Washington Libraries, n.d.) and a wide variety of online articles, websites and social media. In total, we collected more than 500 sources, importing and coding them in NVivo. In what follows we first provide context on the regulation of mineral supply chains from the DRC. Then we outline the main critiques of ethical supply-chain regulation, specifically in the Congolese context. Next, we conceptualize participation before moving on to the analysis of the initiatives themselves. We have structured this analysis in two main parts: 1) international governance instruments, which set the regulatory framework, and 2) responsible sourcing programmes, which include the most important on-the-ground projects, programmes, and initiatives.

Some definitions

Guidelines/guidance texts and standards are a key component of the due diligence architecture. As defined by Wrensch (2020), "a **guideline** provides general guidance, and additional advice and support for policies, standards or procedures." Guidelines are optional or voluntary (idem). They often "serve as a reference for initiatives or even legislation" (Sydow & Reichwein, 2018, p. 14). The Organization for Economic Cooperation and Development's (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (hereafter the OECD Guidance, with a first edition in 2011 and a third edition in 2016) is the most commonly used guidance text for mineral supply chain regulation. It has served, among others, as a reference for the EU legislation on responsible mineral sourcing, as well as many other initiatives. The UN Guiding Principles on Business and Human Rights (2011) are another important guidance text that we will discuss below.

A **standard** is, essentially, "an agreed way of doing something. It could be about making a product, managing a process, delivering a service or supplying materials – standards can cover a huge range of activities undertaken by organizations and used by their customers." ((BSI), n.d.) As noted by Sydow and Reichwein (2018), there are different kinds of standards. These include principles-based standards, certification-based standards, and reporting standards. Principles-based standards are normative frames, like the UN Global Compact, whose implementation is not monitored." (idem, p. 14) Some norms specific to a given sector also fit in this category. Reporting standards involve "more comprehensive reporting via a standardised scheme." (ibid) Finally, standards based on certification are verification-based systems, with verification carried out "either by an external auditor or the participants themselves." (ibid) The growing attention to, and pressure to provide information on, matters of sustainability in supply chains of minerals has propelled standard systems to work in a continuous manner to refine their standards and governance systems. Standard systems have increasingly begun to recognize one another in recent years, and they have begun to address a wider range of sustainability issues (ibid).

MSI Integrity (n.d.) defines **multi-stakeholder initiatives** as "collaborations between businesses, civil society and other stakeholders that seek to address issues of mutual concern, including human rights and sustainability". Multiple "international multi-stakeholder platforms have been established to identify key challenges in responsible material sourcing and to determine how they can be solved" (Sofala Partners & BetterChain, 2019, p. 53). Multi-stakeholder initiatives (MSIs) are appealing to large donors since they help these actors demonstrate alignment with the issues of concern to both civil society and industry (USAID, 2020, p. 9).

According to the 2011 UN Guiding Principles on Business and Human Rights, all businesses are responsible for respecting human rights, which means they have to carry out "human

rights due diligence to identify, prevent, mitigate and account for how they address impacts on human rights." ((OHCHR), n.d.) The OECD Guidance (OECD, 2016a, p. 13) defines **due diligence** as "an on-going, proactive and reactive process through which companies can ensure that they respect human rights and do not contribute to conflict". Due diligence is meant to be carried out in the entire supply chain and distinguishes between the upstream section from the mine to the smelter, and the downstream portion of the supply chain from what the smelter produces to the final products (Schütte, 2019, pp. 674-675). Companies must develop "enabling management systems, for instance by developing risk-based mineral sourcing policies, engaging with their suppliers, documenting the chain of custody and tracking product supply chains back to the smelter or mine level" (Schütte, 2019, pp. 674-675).

For over ten years now, due diligence has emerged "as a new concept to foster ethically responsible raw material supply chains." (Schütte, 2019, pp. 674-675) In the past several years, mandatory regulations have been enacted in companies' "home states," holding these corporate actors to account for negative impacts on human rights and the environment throughout the length of their supply chains, often in far-removed places where production takes place. Spurred on by developments in the human rights due diligence space, several countries, predominantly European, have developed a range of national legislative responses to concerns around human rights conditions and environmental effects of the business activities, in global supply chains, of firms with activities within their borders. These regulations encompass a much wider range than only mineral supplies. The UK Modern Slavery Act of 2015, the French Duty of Vigilance law, the Dutch Human Rights and Environmental Due Diligence law, and the German Supply Chain Due Diligence Act highlight, by their scope, this new trend of wide ranging mHRDD. Other countries, like Belgium, have proposed similar legislation.

Recent literature on these developments views mandatory requirements for due diligence as "a new and potentially effective approach to govern global supply chains" (Gustafsson et al., 2022, p. 1). Gustafsson et al. argue that "by translating international soft norms on due diligence into binding law, MDD [mandatory due diligence] laws hold the promise to contribute to "foreign corporate accountability" in global supply chains," i.e. firms' accountability for adverse effects that occur abroad as a result of their subsidiaries' or suppliers' actions (2022, pp. 1-2).

It is important to note the distinction between due diligence and traceability. **Traceability** is "'the ability to identify and trace the history, distribution, location and application of products, parts and materials to ensure the reliability of sustainability claims'" (The UN Global Compact, quoted in Petavratzi et al. (2019, p. 52). Traceability involves tracing minerals from the mine site where they are produced to the final point at which they are sold, and traceability systems carry out this tracing process (USAID, 2020, p. 8). The

recording of this information in a systematic manner, and its sharing with traceability schemes members, brings about – at least in theory – material traceability. Traceability has several expected advantages for firms, including the mitigation of risks, the improvement of operational efficiency, the secure procurement of supplies, and the acquisition of reputational benefits. Improved traceability is also expected to help satisfy the demands of stakeholders for more information on products' origins (Petavratzi et al., 2019, p. 52).

Traceability is often referred to in tandem with **chain of custody (CoC)**, which involves "documenting business transactions along the full supply chain back to the mine of origin, including by requiring suppliers to share detailed evidence of the supply chain". (Human Rights Watch, 2018, p. 13) Chain of custody entails "[a] record of the sequence of entities which have custody of minerals as they move through a supply chain." (OECD, 2016a, p. 65) Yet traceability and information on the chain of custody, while "useful tools for jewelers [or other companies] who seek to assess and monitor human rights risks at the mine level", do not guarantee respect for "international human rights and environmental standards" in the mines (Human Rights Watch, 2018, p. 41). Many downstream cobalt users have carried out mapping of their supply chains through auditing systems like the standard developed by the Responsible Minerals Initiative (RMI) and the Responsible Cobalt Initiative (RCI) (see below).

In the past few years, firms like Daimler, Volkswagen, and Volvo have become part of traceability and blockchain schemes. Traceability can therefore be described as "a reputational risk management tool." (Deberdt & Billon, 2021, p. 11) Technological approaches, like the use of blockchain, to ensure traceability - discussed in more detail below - have grown significantly in popularity, though such strategies have been critiqued for not verifying that information of sufficient quality enters into the system. As such, they become a "technological fix" to protect corporate reputations (Scheer, 2022). Traceability can be easier to achieve and gathers more support in corporate settings than wider goals such as improved transparency (Levin et al., 2015, p. viii). Yet traceability has a narrow focus on minerals' provenance and does not include other key elements such as monitoring, the mitigation of risks, and reporting on the context in which minerals are produced and traded (The Cobalt Action Partnership, 2021).

Certification has been defined as "the third-party confirmation via audit of an organisation's systems or products" (UKAS, n.d.). It involves the definition of a set of standards, a process for verifying whether a product has met those standards, a certification mark that identifies that verification has been carried out, and an auditing system (Conroy, 2007). Widely applied in goods such as food or timber, the first certification system for mineral resources was the Kimberley Process Certification Scheme (KPCS) for diamonds (Van Bockstael, 2018).

Transparency, another key concept when it comes to human rights due diligence, refers to information that is made visible and readily available to selected actors (Gardner et al.,

2019). According to Carodenuto, Grant, Rebitt, and Cisneros (2022), transparency can be disaggregated into several different dimensions: “1) traceability information; 2) transaction information; 3) impact information; 4) policy and commitment information; 5) activity information; and 6) effectiveness information.” Meanwhile, “origin transparency” is a term referring to information on the origins of a given product, i.e. the sites where it is produced (Carodenuto et al., 2022). In the absence of transparency, it is difficult to implement responsible sourcing strategies since actors cannot identify the relevant upstream suppliers (Scheer, 2022, p. 31).

The concept of **responsible sourcing** stresses the need to engage with risks in the supply chain, rather than avoid them. Responsible sourcing means that a buyer consciously procures products from an ethical source. In mineral supply chains, the concept has become more prominent after initial critiques on mandatory due diligence legislation, which led to companies disengaging from the DRC (Matthysen et al., 2019). This *de facto* embargo, as it has been called, had detrimental effects on local livelihoods (see below). It prompted a lot of critique and a call to go beyond the do-no-harm principle and the focus on “conflict-free” sourcing, and to actually engage with communities in order to contribute to peace and development (Schouten & Miklian, 2020). This notion echoes the Business for Peace (B4P) model suggesting that “international businesses [are] at the frontline of peace, stability and development efforts in fragile and conflict-affected states” (Schouten & Miklian, 2020). Responsible sourcing encompasses “all the risk categories included in the Organization for Economic Cooperation and Development’s (OECD) Due Diligence Guidance, which mainly regard serious human rights abuses, corruption, money laundering, tax evasion and other aspects strictly related to mineral supply chains.” (Mancini et al., 2020, p. 10)

Nowadays, many corporate actors adopt the discourse of responsible sourcing. As Tesla writes in its 2021 Conflict Minerals Report: “Tesla recognizes the importance of mining to local communities and encourages ethical sourcing from the Democratic Republic of Congo (DRC). As recommended by the OECD, we do not support an embargo, implicit or explicit, of any DRC material, but instead allow sourcing from the region when it can be done in a responsible manner through audited value chains” (Tesla, 2021). Increasingly, even companies that do not have operations in conflict-affected regions must ensure that they carefully manage their supply chains, given the possibility for reputational damage (Taka, 2014, pp. 5-6). A few sectors have responded in a particularly active manner to these concerns, namely the technology sector, which has stood behind the formation of the first structures for responsible sourcing of conflict minerals (Deberdt & Billon, 2021, p. 5).

The OECD Guidance, as noted, is a crucial document on which industry actors have based their due diligence actions, and provides them with a foundation for ascertaining if their supply chain contains any mineral sources considered to be problematic, which for many downstream actors has come to mean artisanally mined. In some cases, upstream or

midstream suppliers are refusing artisanally-mined materials because of their downstream clients' concerns. Glencore (2020b) and Umicore (n.d.), for example, explicitly state that artisanal minerals are banned from their supply chains. In parallel, downstream companies, such as BMW, disengaged from the DRC after worries that working conditions in the artisanal and small-scale mining sector would taint its supply chain (Els, 2020). Actors have tended to associate "risks" with ASM in particular. USAID (2020, pp. 8-9), for instance, notes that "due diligence guidance and traceability systems help governments, companies, and civil society identify and manage risks associated with ASM."

In the context of the DRC, assuming a clear divide between **ASM and large-scale mining (LSM)** may result in flawed analysis. In many cases, ASM is indeed rife with supply "risks" due to the lack of formalization of the sector. However, LSM operations are also characterized by significant risks, including labor rights and occupational health and safety (OHS) (Geenen, Bashizi, et al., 2021; Pattisson, 2021; RAID, 2021), environmental pollution (Banza Lubaba Nkulu et al., 2018), or corruption (Geenen, Bashizi, et al., 2021; Resource Matters, 2019), with important reputational repercussions for buyers. Additionally, while some companies argue that their supply originates exclusively from industrial mines, "the complex structure of value chains where artisanal and industrial materials are often mixed at some point" questions this assumption (Resource Matters, 2019, p. 8). Consequently, as some have argued, "rigorous diligence of industrial producers is [also] a necessity." (Resource Matters, 2019, p. 8) In the cobalt sector, as a result of NGOs' original focus on child labour in "problematic" ASM, the industry has centered its response on this emotionally-charged risk (Deberdt, 2022). Companies supported the creation of technocratic tools to enable due diligence; contributed to efforts to validate so-called conforming smelters and refiners processing cobalt; and produced frameworks for reporting and/or disclosing on the supply chain. The focus here was the elimination of reputational risks from a downstream corporate perspective, through the mitigation of ASM-related risks largely by avoiding the sector. Other efforts aim to foster transparency or seek to validate refineries that transform cobalt, through the creation of "frameworks for more transparent reporting or disclosure of the company's supply chains." (Mancini et al., 2020, p. 38) A handful of downstream players have also opted for direct engagement with the cobalt sector (Calvão et al., 2021; Mancini et al., 2020, p. 38), as will be detailed later.

Congo's minerals in focus

Resource governance has been a longstanding challenge in the Congolese context. The two Congolese civil wars took place from 1996-1997 and 1998-2003. The formal end of war in 2003 did not bring about the end of armed conflict and violence in the country, particularly in the country's eastern region, and the associated humanitarian crisis has persisted as well. Earlier research, especially around the so-called "resource curse", tended to link armed conflicts in Africa and the DRC to the desire by armed groups to control access to the country's mineral resources to fund their violent objectives. These so-called "conflict

minerals" became the subject of multiple high-profile global advocacy and research efforts, including by NGOs like the Enough Project and Global Witness (Vogel, 2022). Initiatives to address the challenge of "conflict minerals" have tended to take a multi-stakeholder form, since the associated supply chains are complex and often informal, and the Congolese state has limited capacity on the ground in many areas (Taka, 2014, pp. 5-6). The majority of Congolese exports of natural resources are not formally recorded, a result of tax evasion and the lack of capacity of Congolese state institutions (Geenen, 2015).

Despite the voluntary nature of the OECD Due Diligence Guidance, countries can "take steps to legally require compliance" from downstream companies (Taka, 2014, p. 7). In this regard, the enactment of the United States' Dodd-Frank Act in 2010 was a game-changer for the Great Lakes region and eastern DRC's ASM sector in particular. On 21 July 2010 US President Obama signed into law the Dodd–Frank Wall Street Reform and Consumer Protection Act. Section 1502 requires companies listed in the US to disclose the use of any "conflict minerals" in the production or workings of their products, and whether they obtained these minerals in the DRC or any of its neighbouring countries (IPIS/ULULA, 2019, p. 8). Companies must also supply "an independent audited report on due diligence undertaken on the chain of custody." (Taka, 2014, p. 7). The implementation of the Dodd-Frank Act represents a transformation of human rights due diligence from guidance to legal requirement (Vetter, 2018).

While the Dodd-Frank Act led to an acceleration of due diligence efforts, the associated negative consequences also resulted in a shift in discourse on how future efforts should be designed and implemented. Instead of sourcing "conflict free," more emphasis was put on sourcing *responsibly*, with a clear focus on active engagement with Congolese actors in order to increase local ownership. This set the tone for later regulations and initiatives to take on a more inclusive, holistic, and gradual approach (Cuvelier et al., 2014, pp. 26-27).

In the second half of the 2010s, the responsible sourcing narrative also shifted geographically from the Eastern provinces of Maniema, North Kivu, and South Kivu, as well as materially, from 3TG to cobalt mining. With significant lessons learned in the management of risks linked mostly to direct and indirect funding to non-state armed groups, the industry shifted its focus to the then-Katanga province and its 2C sector. In January 2016, Amnesty International and Afrewatch published their report "This is what we die for: Human rights abuses in the Democratic Republic of the Congo power the global trade in cobalt", with a follow-up monitoring report in 2017 (Amnesty International & Afrewatch, 2016). The reports follow a series of publications released in the previous decade with limited impact (Amnesty International, 2013; Swedwatch, 2007). However, the boom in electric vehicles (EVs) manufacturing in the second half of the 2010s led to increased scrutiny of cobalt supply chains, forcing corporations to act upon critical risks. Amnesty and Afrewatch's report focused on the dangerous conditions in which the artisanal

extraction of cobalt often takes place – including for a number of children engaged in cobalt mining – with frequent and at times fatal accidents in underground tunnels. The report drew attention to the fact that such cobalt "is used to power mobile phones, laptop computers, and other portable electronic devices", and "enters the supply chain of many of the world's leading brands" (Amnesty International & Afrewatch, 2016).

A problematic outcome linked to the Amnesty and Afrewatch report was the fact that it led to an almost exclusive focus on child labor, though more recent data suggest the numbers of children working in ASM had been significantly overestimated, and may be under 5,000 children rather than the often-cited 35,000 (Faber et al., 2017; The Impact Facility, 2020). Moreover, this narrow focus on child labour sidelines more deep-rooted issues such as land rights/access, wealth redistribution, or gender equality (Deberdt, 2022). Beyond child labour, this and other research reports, including one commissioned by Trafigura, in which Johansson de Silva et al. (2019) refer to Congolese ASM miners' "plight," have a tendency to underline the "inherent" shortcomings *of ASM itself*, rather than any broader structural issues or political concerns. These often-cited deficiencies include: insufficient knowledge of the location of mineral concentrations; the failure to use safety equipment in mining shafts and tunnels, including those that bigger mining companies have left behind and that are likely to collapse; unsanitary conditions that increase miners' risk of exposure to water-borne illnesses like cholera and dysentery; and respiratory harm linked to the dust from cobalt (Banza Lubaba Nkulu et al., 2018; Cheyns et al., 2014). The need for formalization is therefore typically cited as a one-size-fits-all solution for what "ails" ASM, as was notably the case with the 3Ts and gold as well (Geenen, 2012), with the assumption that if ASM were organised in a similar manner to LSM, these problems could/would be avoided. Formalization in the artisanal mining sector involves licensing (the Congolese Mining Code allows artisanal miners to work in designated zones), grouping in miners' cooperatives, adherence to the environmental, labour and other regulations from the Mining Regulations, compliance with national mineral certification standards, and formal trade (Cibaye & CIGOHO, 2021; Geenen, 2012).

Recent developments around cobalt must be understood in the context of global market trends. Cobalt is used for the production of lithium-ion batteries for electric vehicles (EV). The EV market has boomed from almost nonexistent in 2010 to 2.3 million vehicles produced in 2020, accounting for 3.2% of the world market for vehicles. Demand for electric vehicles and therefore for cobalt is expected to continue to grow significantly, with Bloomberg projecting that by 2040, EVs will make up more than two-thirds of all cars sold globally (McKerracher & Wagner, 2021).

The United States, Canada, and the European Union all included cobalt in their critical minerals list, highlighting the geopolitical centrality of the mineral. The DRC occupies a prominent place in this, hosting 70% of the world's production and more than half of the

known reserves – the other major producers being Morocco and Australia (Manley et al., 2022, p. 6). With respect to demand, "the EV sector became by far the largest cobalt consumer and now accounts for 40% of total cobalt demand. To 2030, global cobalt demand is set to double, driven by battery applications in EVs." (Cobalt Institute, 2023, p. 2) Observers have also drawn attention to the geopolitical dimensions of rising cobalt demand, as "Mining, processing and consuming countries form allegiances and rivalries to secure the supply of this metal" (Manley et al., 2022, p. 6). The DRC Government made headlines when announcing in November 2018 that cobalt was included in the country's strategic minerals list, leading to the tripling of the current royalty, to 10% of the value on the market (Gouvernement de la RDC, 2018b; The Impact Facility, 2020).

The artisanal and small-scale mining of cobalt in the DRC has contributed significantly to meeting the increased global demand – by some accounts providing up to 30% of total cobalt exports – though large-scale mining remains the biggest source of production. Following fast-growing demand and high prices on global markets, there was rapid growth in ASM in and around Kolwezi, the capital of Lualaba province, a city where many families rely directly or indirectly on mining (Johansson de Silva et al., 2019, p. 10). At the corporate level, the introduction of the state-owned Entreprise Generale du Cobalt (EGC) and the growing interest of private actors such as Trafigura, also highlights the economic and strategic centrality of the ASM sector for global battery manufacturing (Deberdt, 2021b).

Some critiques

A range of critiques have been put forward in the literature on the development of international frameworks for regulating mineral supply chains. Voluntary instruments such as the OECD Guidance or the UNGPs have been critiqued for lacking effective means for monitoring and enforcement (Franciscans International, 2017, p. 13; Human Rights Watch, 2018) as well as complaint mechanisms (Franciscans International, 2017, p. 13). Voluntary measures are also often undercut by auditing systems created with little to no on-the-ground input, performed with poorly trained auditors, and lacking transparency (Human Rights Watch, 2018, p. 29). Yet making human rights due diligence mandatory, it has been pointed out, will not automatically solve all the problems that HRDD is meant to address. Challenges that are expected to persist relate to limited auditing; due diligence legislation that may lack sufficient scope to properly address labour rights issues; and risks of liability that are not high enough to push companies to implement functional due diligence (RAID & CAJJ, 2021, p. 66).

There is also a range of critiques of standards. Significant research has argued that the adoption of standards is frequently only superficial, with companies failing to make changes to their actual practice (Sydow & Reichwein, 2018, p. 14). The Responsible Jewellery Council's pre-review Code of Practices, for instance, was critiqued for not providing sufficient detail on the actual implementation of due diligence in the supply chain, as well as

for the length of time companies can benefit from RJC membership before they are required to comply with the standard (Human Rights Watch, 2018, p. 34). With respect to principles-based standards, which include the International Council on Mining and Metals (ICMM), different studies "have shown that approaches with ambiguous expectations, low adoption costs and high substantive compliance costs, a lack of assurance structures, and weak enforcement mechanisms all predict that the initiative is likely to be adopted but not implemented." (Sydow & Reichwein, 2018, p. 14)

Standards can also not be said to be neutral when implemented. de Neve (2009) found that social and ethical standards which are required of supplying businesses do not only assist with producing changes in working conditions that can be measured and audited, but also help to shape social relations between actors in global chains of production. According to De Neve, standards and codes are not simply tools of a technical nature designed for labour-regime regulation and to ensure that commodities are manufactured to a set of given standards. He argued that they also produce "new social regimes of power and inequality." (de Neve, 2009, p. 63) De Neve (2014, p. 186) similarly noted that corporate actors' ethical involvement is never value-neutral, but rather seek to foster specific production regimes, work values, and types of workers or workers' subjectivities. De Neve added that enforcement of compliance with relevant regulations is typically carried out with the stated objective of workers' protection and empowerment. Yet at the local level, such intervention is frequently "experienced as surveillance and control," with regulations often leading to restrictions on workers' freedom and autonomy in cultural and social contexts "that differ quite radically from the places where ethical policies are formulated. As Dolan puts it, 'the universal rights and values incarnated in standards are largely a priori formulations that have been developed with little (if any) consultation with producers or southern stake holders who represent them'" (Dolan, 2010 cited in De Neve, 2014, p. 187). This is an important starting point for our analysis on small-scale producers' participation.

While standard systems are said to have strengthened transparency for downstream stakeholders with respect to sustainability performance, these systems still exhibit significant differences when it comes to how they guarantee compliance and the degree of transparency in their presentation of results. Although it has become taken for granted to include a multi-stakeholder perspective, different systems have different ambitions in this regard. The majority of schemes are led by industry, with little "Global South" representation. BGR therefore calls for "more efforts on 'localising' these initiatives in national/local multi-stakeholder bodies" (BGR, 2022, p. 42). With respect to ASM cobalt, and notwithstanding the OECD Due Diligence Guidance and smelter audit programmes that align with it, the advancement of responsible sourcing has been greatly hindered by the acute "market confusion" that has resulted from recent years of international stakeholder involvement surrounding the development of a sourcing standard for ASM (RCS Global Group, 2021a, p. 40).

A wider and significant debate is ongoing between approaches that focus on compliance and those that centre on continuous improvement and the mitigation of risks. A process based on compliance involves the creation by refiners of criteria (i.e. based on the OECD Due Diligence Guidance) against which the supply chain of specific minerals is then assessed for compliance. If these criteria are not met, refiners avoid sourcing. When it comes to continuous improvement and risk mitigation, ASM practices and conditions that are viewed as not acceptable may be tolerated in the early stages if evidence exists that these conditions are likely to improve with time. Those who advocate for continuous improvement and the mitigation of risks draw on the OECD Due Diligence Guidance, which advocates for a measurable approach, albeit one within a reasonable time frame, i.e. six months dating from the date of adoption of the plan for risk management, as detailed in the Guidance's supplement on gold. Advocates for this approach argue that it is more beneficial than one based on compliance when it comes to creating and preserving partnerships with supply-chain actors, as well as fostering gradual improvement in ASM. Those who advocate for a strategy based on compliance highlight the need, especially with respect to legality versus legitimacy in the ASM sector, to respect the laws in different jurisdictions. However, the big risk here is to "define legal duties to undertake due diligence against a 'checklist' without also extending a positive legal duty to address harm against workers" (RAID & CAJJ, 2021, p. 66). Similarly, Landau (2019) has pointed to a risk of "cosmetic compliance" whereby a company can be 100% compliant with all due diligence requirements, but there still is no change on the ground. Indeed, although reporting and transparency on company's supply chains has expanded (BGR, 2021), real change on the ground often remains elusive.

An MSI Integrity (2020) report on multi stakeholder initiatives concludes that they are generally "not fit for purpose" of protecting human rights as they often reinforce historical power structures by prioritizing corporate interests over rights holders' interests. This is mainly due to their often top-down character in both the decision making and implementation phases. MSI Integrity demonstrates that CSO representation does not equate to effective rights holders' participation and that there is often a gap between initiatives' rhetoric and the reality on the ground. The limits to MSIs' influence are demonstrated by the following OECD quote: "Companies' participation in the above multi-stakeholder groups may conceivably lead to higher levels of implementation of the OECD Due Diligence Guidance, but the responsibility rests with individual companies to do so." (OECD, 2019, p. 4).

Still, while MSIs might not be fit to replace public regulation and close the so-called "governance gap" of global supply chains, it has been argued that they can complement regulations and play an important role in promoting human rights protection, especially through fostering dialogue, learning and trust-building amongst stakeholders (MSI Integrity, 2020, p. 5). Baumann-Pauly and Trabelsi (2021) also emphasize the potential of MSIs as well

as the necessity to acknowledge the variation amongst MSIs in their focus issues, form, scope and functions they perform, differences that relate to different roles they can potentially take on. Multi-stakeholder initiatives are also increasingly coming to understand the importance of building capacity and ensuring greater investment in ASM in eastern DRC, including a 2020 preliminary study by the Public-Private Partnership for Responsible Minerals (PPA) on the obstacles to access to finance faced by the Great Lakes region's trade in responsible minerals (Deberdt & Billon, 2021, p. 9).

Critiques of the on-the-ground effects of "conflict mineral" supply-chain regulation have tended to fall into several categories. Many of these critiques relate to the impact of the Dodd-Frank Act on eastern DRC (Geenen, 2017). While the Dodd-Frank Act created momentum for international due diligence efforts, it has also been heavily criticized for the unintended negative consequences that followed (IPIS, 2020a, pp. 18-19). These categories of critique include: 1) the high costs and limited returns, for small-scale producers in the affected regions, of responsible sourcing programmes; 2) the possibility of boycott as a result of strict supply-chain regulation; and 3) the empirical findings with respect to the negative socio-economic impacts of such measures on the ground, which includes but is not limited to the possible impact of mineral boycotts. Next, 4) is linked to the impact of responsible sourcing programmes on markets themselves, namely the development of monopolies that then disadvantage small-scale producers. A final critique 5) is related to the problematic implications of "white saviourism" and the perpetuation of neo-colonial dynamics in advocacy campaigns surrounding "conflict minerals" and, more recently, cobalt.

First, the high costs associated with complying with costly responsible-sourcing programmes tend to be disproportionately levied on Global South producers who, because they tend to operate at a small scale, can least afford these high entry barriers (Radley & Vogel, 2015). Problematically, no price premium is offered on the global market for minerals produced by artisanal producers of 3TG mined in compliance with responsible-sourcing requirements, as compared to 3TG minerals produced by industrial mining or by responsible ASM producers located in other parts of the world. Cost is an issue that plagues upstream due diligence programmes, particularly for gold. The cost of implementing due diligence is offloaded onto local, small-scale miners "without any meaningful offsetting compliance premium on prices, thereby creating an illegal trade incentive." (Sofala Partners & BetterChain, 2019, p. 24) It has been argued that access to trustworthy on-the-ground information is the main factor that determines cost and that the greater the extent to which valid information can be generated and publicly shared in an automated or partially automated manner, the lower will be the cost of carrying out upstream due diligence. Finally, given the costs of formalisation, implementing such measures makes it necessary to remove so-called "middlemen" from the supply chain (Sofala Partners & BetterChain, 2019). Yet the distributional and equity considerations of such an approach are often not taken into

consideration when attempting to reduce the scale of the informal economy (Geenen, 2015).

Second, given that Dodd-Frank tended to apply only to certain regions - namely the DRC and neighbouring countries - some analysts were concerned that lead firms and importers might avoid sourcing from these areas entirely, therefore essentially resulting in a boycott (Jeffrey, 2012; Manhart & Schleicher, 2013). The anticipated implementation of the Dodd-Frank Act led then-Congolese President Joseph Kabila to announce a half-year ban on ASM in eastern DRC, with significant consequences for the region (Geenen, 2012; Vogel, 2022, pp. 5-6). In the climate of uncertainty that followed, many companies chose to disengage from the DRC and shift their extractive activities elsewhere. The easiest and safest option for companies to guarantee sourcing conflict-free was to source outside of the DRC, leading to a so-called *de facto* embargo (Cuvelier et al., 2014; IPIS, 2020a).

Third, research on Dodd-Frank's impact has detailed its negative effects on socio-economic conditions at the local level, in addition to the fact that that some regions, particularly gold mines, have experienced more conflict rather than less (Cuvelier et al., 2014; Geenen, 2012, 2017; Parker et al., 2016; Parker & Vadheim, 2017; Sarfaty, 2015; Stoop et al., 2018). Although it is difficult to disentangle the legislation from other dynamics and to assess its direct impacts on communities' livelihoods, many socio-economic consequences have been attributed to the embargo following the Dodd-Frank Act. What amounted to, in practice, a near-boycott on mineral exports from the region led to a range of socio-economic repercussions and had an impact on how supply chains were organised. First, incomes were negatively affected. There is widespread agreement that the slowing down of mining activities, linked to Dodd-Frank and associated measures by then-president Joseph Kabila, had a swift negative impact on artisanal miners' living conditions and on the local economy, which is highly interconnected with ASM (Stoop et al., 2018). Geenen (2012) wrote of increased criminality, unemployment, school dropouts and decreasing household revenues. With Congolese artisanal miners facing more obstacles to selling their minerals, they had less household income, which in turn affected the incomes of those in related occupations, including small-scale traders, owners of shops and restaurants, and taxi drivers (Geenen, 2012). The fall in incomes was linked not only to the *de facto* mineral ban but also to the complementary certification programmes that were put into place. Researchers have also documented indirect impacts on access to healthcare, and child mortality. United Nations University researchers found that rising child mortality could be attributed to the mothers' reduced access to infant healthcare and lower consumption (Parker et al., 2016). While Parker et al. (2016) documented a rise in child mortality as a consequence of reduced health access and consumption, Stoop et al. (2018) found that violence was not reduced, but merely shifted. Next, the establishment of certified mine-site "islands" thrust more actors into the realm of illegality and smuggling, i.e. towards the mining and trade of gold. Gold is easier to smuggle and process, and has been less targeted by policy efforts than the 3Ts.

Research by Parker and Vadheim (2017) and Stoop et al. (2018) revealed that armed groups also shifted towards gold mining and smuggling, with more looting of civilians and militia battles taking place in gold-mining regions. Stoop et al. (2018) also documented growing insecurity from now-unemployed miners, who had to resort to criminal and rebel activities to earn a living.

Next, as already alluded to, given the barriers to entry, a small number of powerful, politically-linked firms frequently dominate "ethical" mineral supply chains. Monopolies therefore result from these developments, or at least, are strengthened. This was the case with Congolese mineral exporter MMR (Diemel & Cuvelier, 2015). Authors such as Vogel and Raeymaekers (2016), Wakenge et al. (2018), and Cuvelier et al. (2014) demonstrated that the implementation of traceability and due diligence programmes resulted in monopolies and had the effect of depressing the prices received by small-scale miners. In South Kivu, the International Tin Research Initiative's ITSCI certification system (discussed in more detail below) established "a monopoly for one export office" and led to a reduction in local market prices (see also Kilosho Buraye, 2018; Ndatabaye et al., 2021). Based on survey data gathered in 2016 Kilosho Buraye (2018) argues that the implementation of a traceability mechanism has resulted in changes, with respect to mineral sales, that have threatened artisanal miners' subsistence activities. Kilosho views the traceability mechanism, given its obligatory nature, as something that was imposed on artisanal miners by a range of actors, including regional organisations like ICGLR but also by the Congolese government, international buyers, and international bodies like the OECD. Kilosho Buraye adds that Congolese government policies as well as the EU directive on "conflict minerals," the Dodd-Frank Act, and ICGLR and ITSCI measures led to significant artisanal-miner discontent (2018, p. 33).

Another monopoly of a similar nature was set up by Mining Mineral Resources (MMR) in Katanga, which led to a drop in prices and caused miners to protest (Cuvelier et al., 2014; Vogel & Raeymaekers, 2016; Wakenge et al., 2018). More stringent regulations paradoxically made it possible for non-Western firms to increase control of exports of minerals from the area (Parker et al., 2016). These scenarios constitute a further obstacle for small-scale producers (Geenen, 2012, 2017).

While the negative consequences outlined above were not intended by policymakers, they were nonetheless foreseen by stakeholders at the local level, and by Congolese and international researchers studying the region. Congolese artisanal and small-scale miners and traders were deeply concerned about the potential implications for them of a *de facto* ban resulting from the Dodd-Frank Act. As discussed in more detail below in the section on participation, these actors requested additional support to allow them to adhere to the associated requirements. Yet those voices were not sufficiently heard in the campaign leading up to Dodd-Frank (Geenen, 2017).

Supporters of Section 1502 tended to view these negative effects as inevitable yet necessary to achieve the ultimately beneficial goal of cutting down on the black market. Advocacy organisations have asserted that the Dodd-Frank legislation achieved its aims, arguing that decreasing the amount of revenues from mining of the 3Ts reduces armed groups' funding and strength (Stoop et al., 2018). Some positive effects of supply-chain regulation have been documented in eastern DRC. For instance, an improvement in health and safety standards was observed in "regulated" 3T mines, as well as a decrease in control by armed groups and enhanced security for civilians. Some observers viewed the heightened attention to conditions in Congolese mines as a positive factor as well (Cuvelier et al., 2014). Yet many scholars have argued, on the contrary, that Dodd-Frank had little positive impact on security in eastern DRC, with armed groups seeking alternative income sources such as the charcoal, cannabis, and palm oil trade (Laudati, 2013). However, methodological concerns about studies on the impacts of the Dodd-Frank Act have been raised, including their "inability to shift focus and integrate positive outcomes of the law over time" (Deberdt & Billon, 2021, p. 10; see also Koch & Burlyuk, 2020).

With respect to the evolving "responsible sourcing assemblage" (Arian, 2021), in which diverse agents and objectives have been brought together under the realm of responsible sourcing, more recent critiques include the fact that responsible sourcing structures continue to be limited when it comes to stakeholder engagement as well as the range of sourcing practices put into place (Deberdt & Billon, 2021, p. 5). The Enough Project, for instance, has advocated for implementing the UNGPs and the Voluntary Principles on Security and Human Rights, and ensuring "that agreements between companies building large-scale, conflict-free mining projects in Congo are fair, inclusive, and fulfilled." (Dranginis, 2016, p. 18) Other challenges include the dearth of comprehensive systems not only for risk identification, but also risk alleviation, particularly when it comes to corporate governance systems. Enforcement tends to be lenient, so a whole series of business-specific factors affect whether responsible sourcing programmes get adopted. Over time, moreover, data on the number of corporations filing Conflict Minerals Reports with the U.S. Securities and Exchange Commission shows a decline in the number of companies completing these documents (Deberdt & Billon, 2021, pp. 5-6). With a somewhat different focus than previous critiques of "conflict minerals"-related sourcing measures in eastern DRC, Deberdt and Billon (2021, p. 7) focus on companies' capacity to enact responses in producing areas and identify impediments to implementation, namely "(1) scope of the artisanal sector; (2) geographical location facilitating smuggling; (3) ability to access markets; (4) integrity of the certification mechanisms; and (5) ability to integrate technology-based solutions." With respect to (4), they note that for both ITSCI, and to a lesser degree the Better Sourcing Program [now Better Mining], the cost associated with monitoring and traceability schemes has been described as a serious obstacle to implementation (idem, p. 8).

When it comes to cobalt, relatively few academic studies to date have examined the putting into practice of responsible sourcing activities (exceptions include Calvão & Archer, 2021; Calvão et al., 2021; Deberdt & Billon, 2021). The growing extent of direct corporate involvement with mining ventures has raised familiar questions about whether firms are simply seeking to manage reputational risks, or to implement genuine CSR (Deberdt & Billon, 2021, p. 11; Diemel & Hilhorst, 2019). According to Trafigura (the commodity-trading firm)'s own research, miners' productivity rose as a result of the Mutoshi responsible-sourcing pilot project. Yet when global cobalt prices were higher, miners' average earnings were below those of the ASM group used for purposes of comparison. The project was to a small extent able to compensate for the drop in cobalt prices that occurred. Yet after this significant price drop, both groups of miners had very low levels of income, which casts doubt on the extent to which the project actually had an economic impact (Deberdt & Billon, 2021). Other issues raised have included the fact that responsible sourcing efforts overlook a major source of issues in the region, namely the interconnections between industrial mining and ASM, especially when it comes to land rights (Deberdt & Billon, 2021, p. 10; Katz-Lavigne, 2019, 2020).

Lack of coordination between different platforms has been a key critique when it comes to cobalt. NGO actors IMPACT and RESOLVE have highlighted the need for increased formal coordination among the multiple international "industry and multi-stakeholder responsible sourcing and development initiatives" active in the Congolese cobalt sector. The two NGOs argue that in addition to coordination across programmes, these initiatives should come to an agreement regarding shared information provision, communicating their respective goals with clarity "in order to minimize confusion in the ASM cobalt sector and to maximize impacts of investments." (The Cobalt Action Partnership, 2021, p. 36)

Finally, a broader critique relates to exploitative structural dimensions of the global economy. As explained by Fidel Bafilemba, mineral prices are globally determined rather than set by the producing country, which results in many artisanal miners earning poverty wages (Vio, 2018). While multi-stakeholder initiatives are increasingly seeing the value of capacity building and greater investment in Congolese ASM, the fact that "these strategies follow a capitalistic extractive logic" raises doubts about the benefits such approaches can provide given that such models might not actually meet miners' needs (Deberdt & Billon, 2021, pp. 9-10). These points can be linked to critiques related to "white saviourism" and the persistence of neocolonial forces in "conflict minerals" and cobalt advocacy campaigns. Christoph Vogel, for instance, in his recently published (2022) book *Conflict Minerals Inc.*, has levied a range of criticisms against "conflict minerals"-based understandings of and responses to the protracted armed conflicts in eastern DRC. One of Vogel's (2022, p. 17) central critique is the "white saviourism" that, in order to justify its transnational advocacy and involvement, "commonly depicts Africa both as a continent governed by savage rulers

and an empty blank slate void of any history at the same time." (see also Kilosho Buraye, 2018; Musamba & Vogel, 2021; Ndatabaye et al., 2021)

Participation

As noted, a key objective of this working paper is to lay the groundwork for further research on small-scale producers' participation in transnational regulation and related initiatives. In this section we conceptualize participation and the way in which it can be understood in the context of the different programmes, projects, and initiatives categorized in this paper. Participation as a concept is closely linked to transparency and accountability (Fox, 2007).

As was mentioned before, **transparency** refers to information that is made visible and available to selected actors (Gardner et al., 2019). Transparency is an important condition for compliance with supply chain regulations, but it is certainly not sufficient (idem; Sarfaty, 2015). It is not because downstream companies can identify all upstream suppliers and have information on production data and risks, that supply chains automatically become more responsible. The key is for rights holders to be able to use this information to hold downstream companies accountable. Therefore, transparency can only be a starting point for accountability, as argued by Postma and Geenen (2020). The notion of **accountability** is based on the assumption, rooted in liberal democracy, that governmental actors are controlled and checked in their activities by their citizens, who have the power to punish or support the government's (in)ability to meet its responsibilities through electoral processes. "Accountability thus consists of two main elements: *answerability* of the accountable subjects to the regulator, enabled by transparent and accessible information; and *enforcement*, which entails the capacity of the regulator to impose sanctions in case of non-compliance." (Postma et al., 2021, p. 3; see also Schedler, 1999). However, the lines between public and private governance have become less defined. As a consequence, non-state actors (such as mineral exporters) are now also expected to answer for their actions to non-state regulators, and face potential sanctions. As Kramarz and Park (2016) note, public accountability logics have been complemented by private and voluntary logics. Affected communities cannot count on their elected officials to regulate supply chains on their behalf; they are increasingly "represented" by private and often foreign actors who exercise accountability *on behalf of* affected communities (Partzsch et al., 2019). For instance, consumers in Europe hold electronics manufacturers accountable on behalf of small-scale producers and affected communities in the DRC by purchasing products certified as conflict-free (idem). Koenig-Archibugi and Macdonald (2013, p. 500) refer to this as "accountability by proxy".

Yet to what extent can the concerns and interests of these groups really be represented by European consumers? How does representation work? Which information is made available to whom, and which information is not shared (Boström et al., 2015; Fox, 2007)? Is there

any room for the small-scale producers and affected communities themselves to hold downstream companies accountable? This is where the concept of participation comes in.

Participation in development

The concept of participation became a buzzword in development studies and practice from the 1990s, leading to participatory discourse and methods becoming the focal point of governments' and development agencies' objectives and activities. Associated approaches include community-based monitoring (CBM) (Muhamad Khair et al., 2021), community-driven development (CDD), participatory budgeting (Goldfrank, 2012; Saguin, 2018), community-based natural resource management (CBNRM) (Musavengane, 2019), citizen science, and ICTs for development. Recent research has demonstrated, for instance, how citizen science can advance the co-creation of knowledge on socio-ecological challenges (Cieslik et al., 2018); how community monitoring interventions can contain corruption and improve service-delivery access and quality (Molina et al., 2016); and how citizen engagement in the delivery of public services affects access to and quality of these services (Waddington et al., 2019; Westhorp et al., 2014). Transparency and accountability interventions, meanwhile, make use of tools such as mobile communications and geo-browser to raise public awareness on governance problems. They may be used to both monitor governments (in)action and hold them accountable (Georgiadou et al., 2014).

However, the participation boom also went hand in hand with critics questioning if an actual paradigm shift was taking place, or if the "tyranny of participation" was actually de-politicizing international development (Williams, 2004). Some literature has emphasized the conditions under which participatory policy implementation can be successful, e.g. Sowman and Sunde (2021) and Musavengane (2019), including the importance of gender sensitivity when it comes to community consultation (Pérez Piñán et al., 2022). Musavengane (2019, p. 55) argues that social capital factors including "the participation of all stakeholders, transparency, reciprocity and effective communication" are the precondition for "successful collaborative community-based projects". A 2015 systematic review found that the majority of studies seek to identify influential elements, while paying little attention to the actual outcomes (Voorberg et al., 2015). Findings from the literature have also pointed to limited or even negative impacts of these approaches on the ground. Saguin (2018), for instance, critically examined the extent to which community-driven development projects in the Philippines could achieve positive results for poor people, and sketched a mixed picture, noting the failure to include the emancipatory politics that had previously led to the success of participatory budgeting. Saguin (2018, p. 229) argued that "when the poor discontinued to join participatory activities despite the economic gains, the project has failed to make participation socially sustainable and indicates control by the elites."

Similarly, Ponte et al. (2022, p. 11), writing on conservation and "development" in Tanzania, explain that international players can deploy partnerships "in rhetorical and instrumental

ways". They argue that such collaboration in the service of governance reform has frequently served to camouflage and give legitimacy to outside agencies' involvement in the reform of domestic policy. In contrast with an official discourse that encourages approaches to reform created at the local level, they argue, these partnerships are a reflection of the power relations in place. Landscapes and rural people's lives are deeply affected by these arrangements, but international bodies' agendas are largely unchallenged. While arguing "that sustainability partnerships are an organized political project in which private sector businesses and their networks are dominant," they nonetheless note that these partnerships can make resources and institutions available that allow "otherwise marginalized rural groups to challenge powerful interests" (Ponte et al., 2022, p. 11). Reforms in the realm of governance have resulted in more narrow democracy, with a focus on counting participants from different groups rather than paying attending to the priorities, needs, and values of communities. The actions of powerful actors have served to empower some while further reducing the power of "those already marginalized by conservation schemes" (Ponte et al., 2022, p. 13). As will be seen with "responsible sourcing" initiatives, sustainability partnerships' focus on sharing *benefits*, rather than sharing *benefits* and *costs,* many initiatives have pushed local communities into crisis, intensified the burden on them, enhanced state power over natural resources, and failed to meet their goals (Ponte et al., 2022, p. 13). Finally, and significantly, while "more complex forms of multi-stakeholder governance structure are becoming more common," simpler schemes, driven by business or government, are also widely in operation (Ponte et al., 2022, p. 16). These types of initiatives tend to utilise selective strategies, such as only infrequently engaging with stakeholders, or by incorporating these actors as representatives but doing so in a manner that restricts their influence (Ponte et al., 2022, p. 16).

According to Miranda Fricker (cited in El Masri et al., 2023), there are two kinds of epistemic injustice. **Testimonial injustice** describes the lesser credibility ascribed to specific groups as a result of prejudice. These groups can include women, minorities, and other communities that face marginalization. As a result of prejudice based on gender and race, these communities are typically viewed as unqualified to contribute, in a legitimate and rational fashion, to knowledge, policy, or the making of decisions. **Hermeneutic injustice** refers to the taking away of marginalized communities' capacity "to give meaning to and intelligibly communicate their experiences to dominant groups": these communities' experiences typically cannot be explained using the dominant groups' approaches and concepts (cited in El Masri et al., 2023). Both kinds of injustice, which originate from Eurocentric systems for knowledge production, result in the erasure of some communities' and people's hermeneutical resources. In turn, these eradications lead to struggles for recognition by communities that are not Western, against Western domination (idem). Local peoples have sovereignty over their own epistemologies taken away from them (idem). The "Eurocentric models of living" imposed in this manner "are capitalist, colonial, racist, and patriarchal, and

expressed through alleged “development” interventions,” which highlights the importance of paying attention to “post-development visions” and “a pluriverse of knowledges.” (idem)

Therefore, top-down designed participatory practices risk becoming administrative exercises aimed at protecting the legitimacy of extractive practices, which actually depoliticizes extractive practices instead of leading to meaningful public participation (Curran, 2019; Perreault, 2015). This observation brings us to the next section on participation in the extractive industries.

Participation in extractive industries

The emphasis on participation in the extractive industries followed the more general trend, but also fits in the longstanding discussions around CSR and the resource-development nexus (Macdonald, 2018, p. 594). It also fits in with the foreign accountability norm and the business for peace nexus, in which simply doing no harm is not sufficient anymore to fulfill corporations’ increased social and environmental responsibilities.

Stakeholder participation began to receive more attention due to the growing belief that engagement across different stakeholders would be beneficial for policy effectiveness as well as for legitimacy, hence also the growth of MSIs. Within stakeholder participation, however, there tends to be a narrow focus on *civil society* participation. In MSIs civil society organizations (CSOs) are often expected to perform a “watchdog” function and are assumed to bring in the “local knowledge”. However, MSI Integrity (2020) has highlighted that CSOs are often not genuinely community based and do not necessarily represent rights holders’ perspectives or interests. The same research reveals that, despite the elaborate discourse on participation, MSIs overall fail to include rights holders (those people that are most directly affected by extractive activities) in decision making and implementation processes. While analyzing the role of participation in the various initiatives included in this working paper, it is important to keep these different concepts in mind. In this working paper, when we question the role of participation in regulations and initiatives, we are talking about the participation of small-scale producers and affected communities, which comes closest to the idea of rights holders’ participation.

Besides the different layers of participation, it is also important to differentiate between the design and implementation phases of regulatory initiatives, and to recognize that participation should be a dynamic and iterative process throughout both phases (see table 1: Phases of Participation below). A lack of participation in the design phase can lead to a legitimacy gap when policy is implemented. In turn, a lack of participation in the implementation phase can lead to compliance or implementation gaps, in which a policy or initiative risks becoming mere narrative without leading to actual change.

In addition to MSIs, Brinks et al. (2021) highlight another model of private regulatory initiative that may be of relevance for participation in the extractive industries, known as Worker-Driven Social Responsibility Models (WSR). Throughout the 2010s, human rights and labour activists have collaborated on the creation of these WSRs (Brinks et al., 2021). Research on Global Production Networks has increasingly drawn attention to the agency of workers who are active in sectors that produce goods for international markets (De Neve, 2014, p. 185). This body of work holds significant potential for understanding artisanal miners' agency when it comes to engagement with global value/supply chains. De Neve (2014) calls for particular attention to labour agency that is not formally organised/institutionalized, nor collective. De Neve adds that "A horizontal approach […] considers localized forms of production organization as well as the livelihood strategies, social norms and relations of reproduction that shape workers' engagement with global production networks" (2014, p. 185).

Table 1. Phases of Participation

Phases	Clarifications	Examples	Bottlenecks
Design, decision making	Who is invited to have a seat at the table? Who makes these decisions?	Public consultation meetings (interviews, focus groups, workshops, technical group meetings, group webinars, online surveys)	Capacity to understand: language and type of vocabulary used can lead to exclusionary effects (MSI Integrity, 2020) Resource constraints: participation costs time and money (MSI Integrity, 2020) Gendered obstacles

Implementation (monitoring, compliance and enforcement)	Who is involved in the implementation of proposed solutions? Who participates in monitoring activities?	Complaint, investigation and resolution programmes Incident reporting and follow-up In-depth field and office audits, worker interviews (Brinks et al., 2021)	Capacity constraints Failure of mechanisms to be rigorous and independent Audit fatigue (In)visibility of certain stakeholders Gendered obstacles

The critiques that have been raised in the development literature on the de-politicization of participation are relevant for analyzing the role of participation in the extractives sector as well. In a recent review of critical literature on the social license to operate (SLO), Meesters et al. (2021) noted that stakeholder engagement actions have tended to restrict the definition of a "stakeholder" to communities living near extractive operations, and to groups that are organized and vocal, while excluding or even criminalizing those not locally resident or who oppose resource extraction projects. They add that engagement is often carried out with the goal of avoiding disruptions or major changes to ongoing extractive activities. Finally, they find that the SLO is limited in its scope: the focus is principally local and/or social impacts, overlooking environmental issues and those with global reach. (Murrey & Jackson, 2020, p. 924) introduce the concept of "localwashing" to demonstrate how corporate actors use racialized narratives about "the local" to legitimize extractive activities with international audiences, thereby reinforcing colonial patterns of exploitation. Vela-Almeida et al. (2022) differentiate between participation from above, which often benefits private interests and colonial and hierarchical power structures, and participatory acts from below, which hold the potential to shape decision-making and lead to transformative and long-lasting change.

Although their inclusion is now receiving more emphasis, ASM stakeholders and especially the women amongst this stakeholder group have previously been excluded from mining policies and initiatives. Subsuming ASM within the "informal" economy obscures its importance for local and regional economies (Fisher et al., 2021, p. 195) as well as its entanglement with formal and industrial mining (Verbrugge & Geenen, 2020). With respect to ASM, Fisher et al. recently argued the importance of "giving value to miners' knowledge(s), perspectives and interests, while recognising the plurality of mining futures" (2021, p. 190) when it comes to possibilities for evolving towards sustainability. They further

contend that not taking miners' perspectives into account restricts the capacity to promote sustainability changes that are deliberative (idem, p. 191). Efforts to formalise ASM, according to this critique, derive from development principles with an emphasis on the short term, which is further strengthened by development finance that is focused on projects. In addition to highlighting the necessity of tackling the structural barriers that hinder sustainability, this critique also emphasizes the importance of bringing miners' perspectives to the forefront (Fisher et al., 2021). With respect to women, their role in ASM has been given more attention lately, in academic research as well as in policy (Geenen et al., 2022). Academic work has highlighted the diverse roles and socio-economic positions of women in ASM (Bashwira & Cuvelier, 2019; Bashwira et al., 2014; Bashwira, 2017; Brottem & Ba, 2019; Bryceson et al., 2013; Buss et al., 2019; Lahiri-Dutt, 2011) as well as the ways in which women have been affected by the formalization of ASM (Byemba, 2020; Hilson et al., 2018; Muheki & Geenen, 2018). In the domain of policy, there has been recent recognition of gender as a cross-cutting issue in formalization strategies (UNITAR & UN Environment, 2018), which is reflected in the publication of gender impact assessment toolkits (Côté et al., 2020; Eftimie et al., 2012) and recommendations (USAID, 2020), the implementation of gender equality projects (such as Alliance for Responsible Mining's Proudly women miners), the creation of female miners' associations (Hilson et al., 2018) and the organization of dedicated conferences (such as the World Bank's gender and mining conference).

Participation in mineral supply chain regulations and initiatives in the DRC

What do we know about the (absence of) rights holders' participation in the case of regulation and initiatives implemented for mineral supply chains in the DRC? Two key areas of focus in the literature have included the lack of consultation with rights holders, and the lack of knowledge on supply-chain initiatives at the local level.

With respect to consulting with rights holders, previous studies have found that rights holders have not been able to participate in decision making around ethical supply-chain regulation (Taka, 2014). While miners have advanced different concerns, such as the lack of legal artisanal mining zones and assistance for ASM communities, their voices have hardly been listened to (Pöyhönen et al., 2010; Radley & Rothenberg, 2014). Different challenges should be highlighted when it comes to consultations with rights holders. First, as mentioned above, civil society participation is not the same as rights holders' participation. DRC has a strong civil society, which is very much involved in research and advocacy around mining. While there are many legitimate organizations that do meaningful and high-quality work, it is also true that most CSOs are based in provincial capitals and urban centers, and do not necessarily have a sustained presence in the mines. As research and consultancy *around* ethical supply chain initiatives has become a "market" in itself, there is also a great deal of competition between these CSOs (Geenen, 2015). Second, most artisanal miners are not "organised to voice their issues and concerns freely and constructively" (Taka, 2014). Despite the legal obligation to become grouped in cooperatives, most miners do not adhere

to these structures, and many cooperatives do not have the protection of miners' collective interests as their primary aim (De Haan & Geenen, 2016). More recently, similar concerns have been expressed regarding the rapid growth in international involvement in cobalt-mining areas (Nkumba-Umpula et al., 2021). Third, some groups face even more barriers to participating and having their voices heard. This is the case for women in ASM. While, as mentioned above, their presence is more and more acknowledged, they still face exclusion. For instance, women are not allowed to work in underground pits, where some of the better-paying jobs in mining are to be found (Arthur-Holmes et al., 2023; Geenen, Stoop, et al., 2021). This is often justified by referring to cultural taboos or to health and safety issues. In some mine sites, women are not allowed at all (Bashwira, 2017). Some refer to the Mining Regulations to justify these exclusions, although according to Congolese law only pregnant women are not allowed to enter mining sites. When it comes to participation, recent research has argued that women "are rarely aware (or made aware) of new laws or measures put in place. This makes women more disadvantaged than men when it comes to dealing with state officials in the ASM sector." (Iguma Wakenge et al., 2021)

In terms of knowledge, several campaigns have already been set up to disseminate (*vulgariser*) the Mining Code, by Congolese CSOs (Radio Okapi, 2020; RDC Coordination des Plaidoyers de la Société Civile pour la Gouvernance des Ressources Naturelles & SARWATCH, 2018) and the Congolese government ("RDC : Willy Kitobo lance une campagne médiatique de vulgarisation du Code minier révisé," 2020). Despite these campaigns, when it comes to the transnational supply-chain initiatives, ASM miners and communities typically have limited knowledge of, and often misconceptions about, for instance, the OECD Guidance or the EU Regulation (IPIS, 2020a, p. 20). Around 2010, everyone was talking about what was locally referred to as "Obama's law" (Dodd-Frank), but the exact requirements and their implications remained largely unknown (see documentary We Will Win Peace (Radley & Chase, 2016). In 2020, the International Peace Information Service (IPIS) argued that awareness-raising should take place regarding the OECD Guidance and EU Regulation, including why the EU Regulation matters, and its "consequences as well as the additional requirements at the upstream level." (IPIS, 2020a, p. 20) For copper and cobalt, the OECD observed in 2019 that "the lowest levels of due diligence awareness and capacity can generally be found at the buying centre level where ASM material is traded." (OECD, 2019, p. 6) In the region, actors from both the state and private sector lack understanding of the concept of due diligence and of the OECD Due Diligence Guidance, and frequently spoke of traceability instead (The Cobalt Action Partnership, 2021). According to Nyembo et al. (2020), the mining-community residents surveyed in Lubumbashi, Lwisha, Fungurume, and Kolwezi lacked awareness of measures for cobalt traceability and certification. Study respondents agreed that these initiatives are not beneficial for the population. With echoes of previous developments in eastern DRC, they expressed concern that these approaches could result in a boycott of cobalt from the DRC (Nyembo et al., 2020, p. 13). Therefore,

there is a need for additional information sharing in Lualaba and Haut Katanga provinces too.

International governance instruments

In the section that follows, we provide an overview of the different international governance instruments for minerals and metals applicable to both 3TG and cobalt production, transportation, trade, and transformation. These instruments have multiplied in recent years, with the years 2010-2011 – associated with the significant focus on "conflict minerals" in the DRC, as described above – a notable turning point that ushered in a proliferation of legislative approaches and standards by a range of bodies and actors. As an example, out of the 30 instruments categorized in table 2 below, 23 were developed since 2010. The first category encompasses international standards and frameworks that are applicable to multiple minerals rather than a single mineral like cobalt or tin. These "mineral agnostic" (RCS Global Group, n.d.-c) or multi-mineral guidance documents, frameworks, and standards also cover multiple risks, which can fall into environmental, social, human rights, transparency-related, and other categories. Additionally, while some of these instruments may at first appear far from the geographical scope of this paper, their localization also reflects the location of headquarters of foreign companies operating in the DRC. These kinds of instruments have been developed and implemented by international bodies like the UN and the OECD, as well as industry organisations like the International Council for Mining and Metals (ICMM).

Next, we discuss regional and national responsible sourcing systems that are specific to tin, tungsten, tantalum, and gold (3TGs) and cobalt, and that were developed in order to address the high-risk perception around these commodities related to the local conditions and impacts of their production. This category encompasses legislative initiatives at the national (e.g. United States) and regional (e.g. European Union) level as well as the Chinese state-sponsored framework for due diligence guidance. In line with the focus on specific minerals, namely the 3TGs and cobalt, we move to a discussion of industry responsible-sourcing frameworks that were devised by industry trade groups (e.g. RMI RMAP) as well as individual companies (e.g. EGC) to address external pressures to "clean" corporate supply chains of the most egregious abuses. We then explore multi-stakeholder initiatives created with a similar purpose as the regional and national frameworks, namely to address the risks typically perceived to be associated with certain minerals in certain contexts, particularly the DRC where the majority of world cobalt production (and a significant amount of the 3TGs and gold) originates. Finally, we present the regulatory framework and relevant institutions in the DRC itself.

We structure this discussion as follows: first, we provide a general overview of each governance instrument before moving to specific examples and frameworks. We also

consider common critiques and concerns for many of these instruments. The following table summarizes the above-mentioned international governance instruments by category, providing a snapshot of each initiative that includes date of inception, the minerals for which they are applicable, and the issue areas they aim to cover. Following the table, we provide additional detail on instruments that are of particular relevance for the 3TGs and cobalt sourced from the DRC.

Table 2. International governance instruments applicable to 3TG and cobalt sourcing

	Name	Initial Date	Material* and Geographical Scope	Issue areas covered
Multi-Mineral and Multi-Risk International Standards and Frameworks	OECD Due Diligence Guidance for Responsible Business Conduct (supports the implementation of the OECD Guidelines for Multinational Enterprises)	2018	All minerals Global	1- Embed responsible business conduct into policies and management systems 2. Identify and assess actual and potential adverse impacts associated with the enterprise's operations, products or services 3. Cease, prevent and mitigate adverse impacts 4. Track implementation and results 5. Communicate how impacts are addressed 6. Provide for or cooperate in remediation when appropriate (OECD, 2018)
	OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD DDG)	2011	All minerals from CAHRAs Global	1- Serious Abuses Associated with the Extraction, Transport or Trade of Minerals 2- Direct or Indirect Support to Non-State Armed Groups 3- Public or Private Security Forces 4- Bribery and Fraudulent Misrepresentation of the Origin of Minerals 5- Money Laundering 6- Payment of Taxes, Fees and Royalties Due to Governments (OECD, 2016a)
	China Chamber of Commerce of Metals, Minerals and Chemicals Importers & Exporters (CCCMC) Guidelines for Social Responsibility Outbound Mining Investment	2015	All minerals Global but focus on Chinese companies	1- Ensure compliance with all applicable laws and regulations 2- Adhere to ethical business practices 3- Respect human rights and protect the rights and interests of employees 4- Protect the environment and conserve resources

				5- Respect stakeholders, promote inclusive development 6- Strive for transparency 7- Strengthening responsibility throughout the extractive industries value chain (The China Chamber of Commerce of Metals, 2018)
	China Chamber of Commerce of Metals, Minerals and Chemicals Importers & Exporters (CCCMC) Guidelines for Responsible Mineral Supply Chains	2015	All minerals Global but focus on Chinese companies	1- Risks of contributing to conflict and serious human rights abuses associated with extracting, trading, processing, and exporting of resources from conflict-affected and high-risk areas 2- Risks associated with serious misconduct in environmental, social and ethical issues (Chinese Chamber of Commerce for Metals, 2015)
	UN Global Compact (UNGC)	2000	All minerals Global	1- Human Rights 2- Labor 3- Environment 4- Anti-Corruption (United Nations Global Compact, n.d.)
	UN Voluntary Principles on Security and Human Rights (VPSHR)	2000	All minerals Global	1- Risk Assessment 2- Interactions Between Companies and Public Security 3- Interactions Between Companies and Private Security (Voluntary Principles on Security and Human Rights, n.d.)
	UN Guiding Principles (UNGP)	2011	All minerals Global	Pillars: 1- State Duty to Protect Human Rights 2- Corporate Responsibility to Respect Human Rights 3- Access to Remedy (Business & Human Rights Resource Centre, n.d.)
	IFC Performance Standards	2006	All minerals Global	1- Risk management 2- Labor 3- Resource Efficiency 4- Community 5- Land resettlement 6- Biodiversity 7- Indigenous People

				8- Cultural Heritage (International Finance Corporation (IFC), n.d.)
	International Council for Mining and Metals (ICMM) Mining Principles	2003	All minerals Global but focus on ICMM members	1- Ethical Business 2- Decision Making 3- Human Rights 4- Risk Management 5- Health and Safety 6- Environmental Performance 7- Conservation of Biodiversity 8- Responsible Production 9- Social Performance 10- Stakeholder Engagement (International Council for Mining and Metals (ICMM), n.d.)
	Mining Association of Canada (MAC) Toward Sustainability in Mining (TSM)	2004	All minerals Global but focus on Canadian companies and companies operating in Canada	1- Biodiversity Conservation Management 2- Climate Change 3- Crisis Management and Communications Planning 4- Indigenous and Community Relationships 5- Preventing Child and Forced Labor 6- Safety and Health 7- Tailing Management Protocol 8- Water Stewardship (The Mining Association of Canada, n.d.)
	Initiative for Responsible Mining Assurance (IRMA)	2018	All minerals Global	1- Business Integrity 2- Planning for Positive Legacies 3- Social Responsibility 4- Environmental Responsibility (Initiative for Responsible Mining Assurance, n.d.)
	RMI ESG Standard (applicable to mineral processors, smelters, and refiners, including integrated to mine sites)	2021	All minerals Global	1- Environmental 2- Occupational Health and Safety 3- Social 4- Governance (Responsible Minerals Initiative (RMI), 2021)
	Global Reporting Initiative (GRI) 1- Universal Standards 2- Sector Standard for Mining (proposed)	 2016 2023	All minerals Global	1- Reporting (Global Reporting Initiative (GRI), n.d.)
	Extractive Industries Transparency Initiative (EITI)	2005	All minerals Global but focus on member countries	1. Oversight by the Multi-stakeholder Group 2. Legal and Institutional Framework

			and supporting companies	3. Exploration and Production 4. Revenue Collection 5. Revenue Allocations 6. Social and Economic Spending 7. Outcomes and Impact (Extractive Industries Transparency Initiative (EITI), 2019)
	EU Battery Regulation	2023	Cobalt, nickel, lithium, and natural graphite Global	1- Mandatory supply chain due diligence (proposed Measure 13, Option B) (European Commission, 2020b)
3TG- and cobalt -specific regional and national responsible sourcing systems	Dodd-Frank Section 1502	2010	3TG DRC and neighboring countries	OECD issue areas to Securities and Exchange Commission (SEC)-listed companies.
	EU Regulation 2017/821	2017	3TG CAHRAs	OECD issue areas to EU-based importers.
	International Conference of the Great Lakes Region (ICGLR) Regional Certification Mechanism (RCM) (RCM is integrated into the DRC 2018 Mining Code).	2010	3TG ICGLR member countries	1- Mine Site Inspection 2- Chain of Custody 3- Export and Certification (International Conference on the Great Lakes Region (ICGLR), 2010)
Industry responsible sourcing frameworks	London Metal Exchange (LME) Responsible Sourcing Requirements	2019	Cobalt and Tin Global but focus on LME-registered brands	1- OECD Issue Areas 2- Environmental Management System (aligned with ISO14001) 3- Occupation Health and Safety Management System (aligned with ISO 45001/OHSAS 18001) (The London Metal Exchange (LME), n.d.)
	London Bullion Market Association (LBMA) Responsible Sourcing Programme (including Responsible Gold Guidance)	2012	Gold Global but focus on LBMA members	OECD Issue Areas for LBMA Good Delivery List (GDL) Refiners
	Responsible Jewellery Council (RJC) Code of Practices (CoP)	2008	Gold Global but focus on RJC members	1- General Requirements 2- Responsible Supply Chains and Human Rights 3- Labor Rights and Working Conditions 4- Health, Safety and Environment

				5- Gold, Silver, PGM, Diamonds, and Colored Gemstone Products 6- Responsible Mining (Responsible Jewellery Council (RJC), 2019)
	World Gold Council (WGC) Responsible Mining Principles	2019	Gold Global but focus on WGC members	1- Ethical Conduct 2- Understanding our Impacts 3- Supply Chain 4- Safety and Health 5- Human Rights and Conflicts 6- Labor Rights 7- Working with Communities 8- Environmental Stewardship 9- Biodiversity, Land Use and Mine Closure 10- Water, Energy and Climate Change (World Gold Council, 2019)
	Dubai Multi-Commodity Center (DMCC) Rules for Risk Based Due Diligence in the Gold Supply Chain (RBDG), now known as the Emirates Bullion Market Committee Rules for Risk Based Due Diligence in the Gold Supply Chain (RBDG)	2016	Gold Global but focus on DMCC members of accreditation initiatives	1- Comply with best practice and standards in Anti-Money Laundering (AML) and Combatting Terrorism Financing (CTF), avoid contributing to conflict and prevent abuses of Human Rights. 2- Build constructive engagement with suppliers to source responsibly from Conflict-Affected and High-Risk Areas: 3- Demonstrate significant and measurable efforts to improve of the ongoing due diligence, including monitoring emerging risks in the supply chain (Dubai Multi Commodities Centre (DMCC), 2020)
	Responsible Minerals Initiative Responsible Minerals Assurance Process (RMAP)	2010	3TG and Cobalt Global Smelters and Refiners	OECD issue areas (Responsible Minerals Initiative (RMI), n.d.-b)
	Cobalt Institute (CI) Cobalt Industry Responsible Assessment Framework (CIRAF)	2019	Cobalt Global but focus on CI members	1- Air/Water/Soil Environmental Impacts 2- Biodiversity 3- Occupational Health and Safety (OHS) and Working Conditions 4- Conflict and Financial Crimes 5- Human Rights Abuses 6- Worst Forms of Child Labour 7- ASM 8- Livelihoods 9- Resettlement (Cobalt Institute, n.d.-b)

	Entreprise Générale du Cobalt (EGC) Responsible Sourcing Standard	2021	Cobalt DRC with focus on mining cooperatives, EGC, and cobalt buyers	1- Organisational Governance and Management 2- Site/Mine Site Management 3- Mineral Transport 4- Ore Purchasing and Buying Station Management 5- Processing Plants 6- Supply Chain Due Diligence 7- Reporting (Entreprise Générale du Cobalt (EGC), 2021)
Multi-stakeholder frameworks	Alliance for Responsible Mining (ARM) and Resolve's Code of Risk-mitigation for Artisanal and small-scale mining engaging in Formal Trade (CRAFT)	2018	Gold Global ASM Mineral Producers	1- Serious Human Rights Abuses 2- Terms of Employment 3- Occupational Health and Safety 4- Community Rights 5- Local Value Added 6- Land Use and Biodiversity 7- Water Use 8- Energy Use 9- Material Use 10- Closure and Land Rehabilitation 11- Mine Waste and Waste Water 12- Air Emissions and Noise 13- Business Practices 14- Management Practices (Alliance for Responsible Mining (ARM), 2018, p. 70)
	Alliance for Responsible Mining (ARM) Fairmined Standard for Gold and Associated Precious Metals	2013	Gold Global Artisanal and Small-scale Mining Organizations	1- The Millennium Development Goals and Declaration on Sustainable Development 2- Legality 3- Human Rights 4- Decent Work 5- Quality of Life and Sustainable Human Development for ASM communities 6- Environmental Stewardship 7- Gender Equality 8- Multicultural Nature 9- No Contributions to Armed Conflicts (Alliance for Responsible Mining Foundation, 2014, pp. 16-17)
	Fairtrade Standard for Gold and associated Precious Metals for Artisanal and Small-Scale Mining	2013	Gold Global Artisanal and Small-scale Mining Organizations	1- Management Systems 2- Membership and Boundaries 3- Legal Responsibilities 4- Relationship with Local Communities 5- Traceability 6- Product Composition

				7- Responsible Sourcing and Market Information 8- Management of Production Practices 9- Management of Toxic Substances 10- Development Potential 11- Democracy, Participation and Transparency 12- Non-Discrimination 13- Pre-Finance 14- Pricing (Fairtrade International, 2013)
	Artisanal and Small-Scale Mining (ASM) Cobalt Environmental, Social and Governance (ESG) Management Framework (proposed)	2021	Cobalt DRC with focus on Artisanal and Small-scale Mining Organizations	1- Good Organizational Governance 2- Respecting Workers' Rights 3- Respecting and Complying with the Law 4- Ensuring Workers' Occupational Health and Safety (OHS) 5- Contributing to Community Development 6- Protecting the Environment and Stewarding Natural Resources 7- Trading Transparently and Fairly (IMPACT & RESOLVE, 2021, pp. 20-24)

* For the purpose of this paper the described material scope only covers 3TG and Cobalt.

Source: Authors' compilation

Multi-mineral and -risk international standards and frameworks

OECD Due Diligence Guidance for Responsible Business Conduct

The OECD has been a highly influential actor internationally when it comes to the human rights due diligence of business. The Organisation for Economic Co-operation and Development (OECD)'s Due Diligence Guidance for Responsible Business Conduct supports the implementation of the OECD Guidelines for Multinational Enterprises. The Guidance is the answer to critiques of the lack of clarity of the Guidelines (see for example Cernic, 2008). According to the Paris-based organization, implementing those recommendations provides companies with mechanisms to address worker-related, human rights, environmental issues, corruption, and other negative governance impacts by the company but also throughout its supply chain. As a material agnostic tool, the Guidance is not geared specifically towards minerals supply chains but is widely implemented globally, including in the metals and mining industry. Using actionable recommendations, the Guidance also aligns with the UN Guiding Principles and the International Labor Organization (ILO) Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy (OECD, 2018, p. 3).

Ruggie and Nelson (2015) argue that the OECD's Due Diligence Guidance for Responsible Business Conduct, and by extension the guidelines it seeks to implement, have become a "'brand' of good corporate conduct" (idem, p. 122) but that the lack of effective requirements tarnishes its performance. They contend that OECD member states' unwillingness to move from a voluntary to a mandatory scheme severely weakens the normative power of the guidance. In this sense, the two researchers argue that "excellent precedents, good practices, and emerging possibilities already exist" (idem, p. 123) in the modalities of implementation of such instruments, and should be followed to redress abuses suffered by communities impacted by corporate practice. The non-binding nature of the guidelines (and consequently the guidance) is a frequent point of contention raised by researchers (Reinert et al., 2016). Davarnejad (2011) also echoes these critiques, highlighting the failure of the multilateral dispute resolution mechanism known as specific instances to effectively address corporate abuses. In particular, she points to the (1) ambiguous and vague content, (2) weak legal construction, and (3) uneven expectations and multiple approaches spurred by the unclear legal commitment (idem, p. 352).

The OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas

The OECD's Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance or OECD DDG) was established in 2011 following multilateral efforts. Since then, it has become the most influential standard for a number of supply chain initiatives and, as Ruggie and Nelson argue, the de facto international standard (Ruggie & Nelson, 2015). The OECD Guidance offers a practical guide for carrying out comprehensive due diligence (IPIS/ULULA, 2019, p. 8), which the OECD defines as "an on-going, proactive and reactive process through which companies can ensure that they respect human rights and do not contribute to conflict" (OECD, 2016a). Concretely, the Guidance lays out how corporations can recognize and handle risks they encounter in their supply chains. Annex I presents a 5-step framework for due diligence, including (1) establishing strong company management systems, (2) identifying and assessing risks in the supply chain, (3) designing and implementing a strategy to respond to those risks, (4) carrying out independent third party audits, and (5) reporting on supply-chain due diligence. The Guidance's Annex II presents a model supply chain policy. As part of that, the main risks perceived to be associated with mineral sourcing from "conflict-affected and high-risk areas" are listed. These include "serious abuses" such as torture, cruel, inhuman and degrading treatment, forced labour, child labour, gross human rights violations including sexual violence, and war crimes; but also bribery and money laundering (idem, p. 21). Annex III includes suggested measures for risk mitigation. The 2016 edition of the Guidance also includes specific supplements for the 3Ts and for gold.

The Guidance was endorsed by the International Conference on the Great Lakes Region (ICGLR), a regional entity that includes the DRC. Nine countries that are not members of the

OECD also follow the OECD Guidance. China has “recognized the guidance as an international standard for conducting responsible mineral supply chain due diligence.” (Amnesty International & Afrewatch, 2016, pp. 40-41) [See “industry guidelines” below for the Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains]. The EU Conflict Minerals Regulation 2017/821 explicitly mentions the OECD Guidance as the core instrument for its implementation (Mancini et al., 2021, p. 4). In 2012 the Democratic Republic of Congo integrated the OECD Guidance into its national legislation for the 3Ts and gold, which means that businesses in the DRC operating in the supply chain for these minerals are obliged to carry out due diligence. According to Congolese law, the list can be expanded to include new minerals, in line with a determination of the ICGLR (idem, pp. 43-44).

The OECD Guidance’s far-reaching acceptance demonstrates increasing recognition at the global level of companies’ duty to responsibly manage their supply chains when it comes to minerals extracted from conflict-affected or high-risk areas (RCS Global Group, 2017). The OECD Guidance is applicable for businesses that are domiciled and/or carry out their activities “in the OECD Member States, endorsing States and adhering States” (Amnesty International & Afrewatch, 2016, p. 41). The Guidance is also consistent with the UN Guiding Principles' due diligence framework. Although the OECD Guidance is not mandated by law, it does provide firms with instructions of a more detailed nature on the steps needed to carry out human rights due diligence when producing in or purchasing minerals from conflict-affected or high-risk areas (idem, pp. 40-41).

Recently, the OECD (2022) conducted a study assessing the adoption of the Guidance, and more specifically of the 5-Step framework and the Annex II Model Policy, across 502 companies from 67 countries. The results show a 15% uptake of the framework and 13% for the policy. These are seemingly low numbers, but considering the diversity of the sample, a degree of progress. The report also showed the geographically diverse results, with the United States’ sample consistently ranking at more than 25% of alignment with the Guidance, significantly higher than other regions. Finally, the location in the supply chain also showed important differences, with 3TG and cobalt smelters reaching an uptake of 51% for the 5-Step framework, and demonstrating an alignment of 24% with Annex II. The report also studied public reporting through an analysis of civil society, media, and other stakeholder reports found online. They found that (1) there is a broad distribution of reporting with 40 different minerals covered by corporate actors and (2) there is an outsized focus on 3TG and cobalt with 75% of the reports on these two mineral categories. Beyond these, the report also underlines that more research needs to be done to appropriately address these issues.

The OECD annually organizes a Forum on Responsible Mineral Supply Chains to evaluate and debate OECD Due Diligence Guidance implementation as well as other initiatives

(Organisation for Economic Co-operation and Development (OECD), 2022). The 15th such forum was held in early May 2022 (idem). According to Koch and Burlyuk (2020), these fora played a key role in the policy process as they were prestigious and inclusive enough to be accepted by both advocacy organizations and policy makers. The Multi-Stakeholder Steering Group preparing the fora incudes representatives from governments as well as civil society and industry organizations. In these fora, stakeholders from many mineral-producing countries are present too. They actively participate in the discussions and share their on-the-ground experiences. Yet once again, it is important to critically look at issues of participation and representation, as civil society organizations may or may not accurately represent the interests of small-scale producers (MSI Integrity, 2020).

The OECD Guidance also proposes steps for the creation of economic opportunities for ASM miners, urging stakeholders to implement formalization and legalisation projects in ASM communities. One focus is on creating "secure, transparent, and verifiable supply chains from mine to market" and on due diligence for "legitimate" artisanal and small-scale mining. The Guidance acknowledges that legitimacy is a complex issue, but states that "legitimate refers, *among others*, to artisanal and small-scale mining that is consistent with applicable laws" (OECD, 2016a, p. 69, emphasis in original); see also OECD (2019). When the legal framework is not enforced, then "the good faith efforts of artisanal and small-scale miners and enterprises" will be recognized (ibid). Another focus is making sure that "legitimate" ASM communities are able to reap benefits from the continuation of trade in conflict-affected and high-risk areas (quoted in Johansson de Silva et al., 2019, p. 13). A key point then is the fact that the Due Diligence Guidance advocates for ongoing involvement with producers, with disengagement as an option only if all others have failed (Levin Sources, 2021a, p. 20). The question of what constitutes "legitimate" ASM and why, and who makes these decisions, is a crucial one that merits far greater scrutiny and that is also part of considerations related to participation in these contexts.

The CCCMC Guidelines for Social Responsibility Outbound Mining Investment

The China Chamber of Commerce of Metals, Minerals and Chemicals Importers & Exporters (CCCMC) Guidelines for Social Responsibility Outbound Mining Investment provide a normative framework for the governance of Chinese mining investments and operations. The CCCMC encompasses around 6,000 companies, including the majority of mining enterprises with foreign investments.

The Guidelines align with the UN Global Compact and the Chinese-sponsored Guiding Opinions on Performance of Social Responsibilities by State-owned Enterprises (Emerging Markets Sustainability Dialogues, 2014). The document was developed in partnership with the German Gesellschaft für Internationale Zusammenarbeit (GIZ), the OECD, and non-profit watchdog, Global Witness. As Buhmann (2017, p. 136) argues, the integration of international human rights instruments in the CCCMC Guidelines (see also the Guidelines for

Responsible Mineral Supply Chains below) is surprising considering the lack of application of these same instruments inside China itself.

The CCCMC Guidelines for Responsible Mineral Supply Chains

Developed by the CCCMC, an organization linked to the Chinese Ministry of Commerce, the Guidelines for Responsible Mineral Supply Chains align with the OECD Guidance despite China not being a member of the organization (Buhmann, 2018). This also underlines the international recognition of the OECD instrument. The Due Diligence Guidelines for Responsible Mineral Supply Chains (CCCMC Guidance), like the OECD Guidance, constitute a series of baseline guidelines and standards to help companies identify, avert, and alleviate risks of exacerbating, in a direct or indirect manner, human rights abuses or conflict. Given China's positioning as the world's biggest importer of cobalt raw materials and biggest cobalt refiner globally, it is clear that China has a key role to play in implementing due diligence (Petavratzi et al., 2019).

The risks covered in the Chinese Guidelines include serious abuses of human rights, namely cruel, inhuman, and degrading treatment, and torture; forced labour; child labour in its worst forms; war crimes, crimes against humanity, or genocide; and other blatant abuses and violations, including widespread sexual violence. Other risks listed include support, either direct or indirect, "to non-state armed groups and public or private security forces"; "Corruption, money laundering and payments to governments", and inadequate "Occupational health and safety conditions," for both physical and mental health of employees (Responsible Cobalt Initiative (RCI) & Responsible Minerals Initiative (RMI), 2021, p. 17). Other issues covered by the Chinese Guidelines include the rights of indigenous peoples, biodiversity, and pollution. While the CCCMC's guidelines are similar to the OECD Guidance, it is said that the specific mitigation measures commercial actors should take are of a less prescriptive nature than with the OECD Guidance (Bayer & Cooper, 2019, p. 3). Arrangements between companies and CCCMC also reportedly exist. For instance, according to Know the Chain (2020, p. 42), Apple

> has led the development of a cobalt working group in collaboration with the China Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters, which is intended to carry out collective action to address the social and environmental risks of cobalt and create standardized audit protocols.

The application of the Guidelines to, mostly, state-owned enterprises, either through direct investments or through proxy investments, is striking (Buhmann, 2017). Saegert and Grossman (2018, p. 4) even consider that the guidelines "have succeeded in establishing China as an actor shaping the framework for responsible mineral supply chains." The Guidelines aim at providing operational details on the implementation of the second set of guidelines on mining investments. Importantly, and as underlined by Buhmann (2017), these guidelines do not align with the more traditional Chinese approach to soft power and do not support any Chinese-sponsored value or practices abroad. However, they remain closely

linked to Chinese politics as a 'respectable', UN and OECD supporter when it comes to mining investments, despite the questionable practices of Chinese private and state-owned companies in jurisdictions like the DRC (Global Witness, 2020; RAID, 2009).

The UN Guiding Principles on Business and Human Rights

The UN Guiding Principles on Business and Human Rights (UNGPs) have been - at least until the advent of the OECD Due Diligence Guidance - the standard with the widest acceptance. The UNGPs lay out what is expected of states and corporations in terms of the protection and respect of human rights when it comes to business activities, including through business actors' supply chains (RAID & CAJJ, 2021, p. 1). They were developed by the Special Representative of the Secretary-General on human rights and transnational corporations (United Nations, 2011, p. iv) and endorsed by the UN Human Rights Council in June 2011. The UNGPs' 2011 endorsement by the Human Rights Council was described by the Office of the High Commissioner for Human Rights as a turning point with respect to attempts to address globalization and business's negative effects on people. The UNGPs' Reporting Framework is said to be "the world's first comprehensive guidance for companies to report on how they respect human rights." (The Critical Minerals Association ESG Working Group, 2021)

The UNGPs center on three key elements: the "state duty to protect human rights," the "corporate responsibility to respect human rights," and "access to remedy" (United Nations, 2011, p. iv). In line with the state's duty to protect human rights, states have to guard against human rights violations by third parties, including business operations, in their territory and/or jurisdiction, which "requires taking appropriate steps to prevent, investigate, punish and redress such abuse through effective policies, legislation, regulations and adjudication." (idem, p. 3) According to the corporate responsibility to respect human rights, firms should ensure they do not contravene others' human rights, and should deal with any negative impacts on human rights (idem, p. 13). Businesses' responsibility relates to human rights that are internationally acknowledged, i.e., at least those contained in the International Bill of Human Rights and in the International Labour Organization's Declaration on Fundamental Principles and Rights at Work (ibid). The UNGPs refer specifically to human rights due diligence and explicitly acknowledge that the concept addresses risks to affected people, rather than to business. Finally, concerning access to remedy, and in line with their duty to protect, states are expected to implement the necessary measures to make sure, "through judicial, administrative, legislative or other appropriate means, that when such abuses occur within their territory and/or jurisdiction those affected have access to effective remedy." (idem, p. 27) Therefore, accountability for abuses, as well as transparency about how these abuses are addressed, are key dimensions of the UNGPs.

Given their status as guiding principles, the UNGPs are not meant to be interpreted as constituting the creation of new obligations under international law ((OHCHR), n.d.). Yet to fulfill their obligations under the UNGPs, states can make it a legal requirement for corporations to abide by "the UNGPs, both OECD guidelines, and other relevant instruments." (RAID & CAJJ, 2021, p. 66) Even if the host state in the country where a given company has operations is not able or willing to perform its obligations with respect to human rights, the company must still do so (ibid). However, due to the voluntary nature of the UNGPs, implementation rests on companies' willingness to respect the relevant norms (Franciscans International, 2017, p. 9), which is the primary critique of the UNGPs.

The International Council on Mining and Metals' Responsible Sourcing Guidance

The International Council on Mining and Metals (ICMM)'s voluntary guidance applies to the upstream segment of the supply chain. The guidance was prepared to offer advice on responsible-sourcing practices to "ICMM and its members (mineral and metal companies, metal and mining associations)". ICMM's guidance is more applicable for LSM firms (Levin Sources, n.d.-b, p. 56).

Additional Applicable ESG Standards

The profusion of standard-setting organizations and the development of tools aimed at enhancing the mining sector's performance on environmental, social, and governance issues started in the early 2010s. In the 3TG and cobalt sectors, mineral-specific standards and frameworks (see following part) are combined at the implementation level with mineral agnostic and risk diverse instruments. In this sub-part we address some of the standards applicable to the industry and embraced by many companies headquartered abroad but operating in the DRC's mineral sector. These include (1) the International Finance Corporation (IFC) Performance Standards, (2) the Mining Association of Canada (MAC) Toward Sustainability in Mining (TSM) protocols, the Initiative for Mining Assurance (IRMA), and the Responsible Minerals Initiative Environmental, Social, and Governance (ESG) standard.

The **International Finance Corporation (IFC) Performance Standards** cover 8 critical areas of corporate sustainability (see Table 2 above) and are governed by the Policy on Environmental and Social Sustainability. Alongside the IFC's Access to Information Policy, the policy and the performance standards constitute the organization's Sustainability Framework.

The Sustainability Framework comprises IFC's Policy and Performance Standards on Environmental and Social Sustainability, and IFC's Access to Information Policy. The Performance Standards of 2006 build on a 1998 version and integrate the UN Norms on Transnational Corporations and Other Business, the UN Global Compact, and the OECD Guidelines for Multinational Companies. However, as a tool of corporate governance reinforcing the belief that companies should positively impact environmental, social, and

governance outcomes through their investments, the standards fail to account for a precautionary approach (Morgera, 2007). Oxfam International (2010, p. 1) also critiqued the Performance Standards and recommended the strengthening of the instruments in 6 different areas, including (1) community engagement and "broad community support", (2) transparency, (3) project definition and categorization, (4) demonstrating project-level development impacts, (5) application of the Performance Standards to financial intermediaries and (6) human rights .

The Mining Association of Canada (MAC) Toward Sustainability in Mining (TSM) protocols were developed as a response to the industry's risk to see its social licence to operate impacted by malpractice. The protocols constitute a powerful tool for extra-territorial reach of home country institutional drivers on corporate behavior in the country of production (Buchanan & Marques, 2018). As a critical host jurisdiction for mining companies, this is of particular importance in Canada and abroad. The TSM protocols were developed by the association after consultation with stakeholders, including Aboriginal communities, labour organizations, government, and environmental and social NGOs, and became at their launch in 2004 a condition for membership in MAC (Chalmers et al., 2012). The organization built on the Brundtland Commission definition of sustainable development in 1987 to create protocols that support a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (idem, p. 3). Jarvie-Eggart (2015) argues that while progress has been made in most of the areas covered by each protocol, biodiversity conservation management still remains to be improved. The lack of clear, measurable metrics standardized throughout the industry constitutes a severe weakness of the protocols. More critically, Fitzpatrick et al. (2011, p. 376) support that the evolution of the MAC TSM systems shifted from "an ambitious and holistic partnership involving a range of stakeholders to a focused, member-specific agenda that addresses a few performance issues".

The Initiative for Mining Assurance (IRMA) is based on both the North American-based Framework for Responsible Mining (a joint effort by NGOs, retailers, investors, insurers, and technical experts) and the Australian-based Mining Certification Evaluation Project (MCEP) (Schiavi & Solomon, 2006). The organization describes itself as the only third-party certification for industrial mines equitably governed by the private sector, local communities, civil society, and workers (Initiative for Responsible Mining Assurance (IRMA), n.d.-b). IRMA is particularly recognized for its work on indigenous communities and the certification system has been described as the most promising extractive industry multi-stakeholder initiatives involving indigenous peoples (MacInnes et al., 2017, p. 157). However, IRMA encompasses a much broader set of issues (see Table above) based on a 3-level achievement (IRMA 50, 75, 100), and is widely considered one of the most credible mining certification mechanisms (Earthworks, n.d.). While not yet implemented in DRC's industrial operations, the standard is an important baseline against which high-performing companies and mines sites can be assessed.

The Responsible Minerals Initiative Environmental, Social, and Governance (ESG) standard is a recent addition to the RMI Responsible Mining Assurance Process set of standards. The standard aims at improving conditions for workers, addressing environmental and community impacts, and managing governance risks in all mineral supply chains (Responsible Minerals Initiative (RMI), 2021). For the first time, the RMAP, usually aligned with the OECD Due Diligence Guidance Annex II risks, went beyond these risks to integrate the full scope of ESG risks, including operations' impacts on environment and biodiversity and hygiene and workers' protections, among others (ibid.).

3TG and cobalt -specific regional and national responsible sourcing systems

The US Dodd-Frank Act

Concerns around "conflict minerals" from the DRC reached the US around 2008. In 2009 two different law proposals had been submitted, the second of which gained considerable support from American advocacy organizations like The Enough Project, but also from American and Canadian mining companies with an interest in portraying minerals from the DRC as tainted by blood, so as to contrast them with their own "clean" minerals (Geenen & Custers, 2010). In 2010 the Act was passed in Congress.

The mandatory features of the Dodd-Frank make it different from earlier initiatives that relied largely on participation and/or compliance of a voluntary nature (Deberdt & Billon, 2021). The law's objective of holding downstream commercial businesses accountable for their upstream suppliers' practices was a major change from previous mechanisms that focused on the actual mining. Such "governance at a distance" (Young et al., 2018) introduced new challenges, including the ability to engage with "deep suppliers", defined as "distant lower-tier producers who are positioned at a focal point to mitigate supply chain problems" (Young et al., 2018, p. 3, quoted in Deberdt & Billon, 2021, p. 2).

The Act's implementation lies in company reporting, by firms listed on stock exchanges in the US, to the US Securities and Exchange Commission (SEC). Section 1502 of the Act aims to break the (perceived) linkages between minerals and the mineral trade, and the financing of conflict, in eastern DRC. As discussed, the DRC and its neighbouring countries in the Great Lakes region both nationally and regionally, as well as the European Union, have put regulations with similar goals into place (Schütte, 2019, pp. 674-675).

Dodd-Frank 1502 did not forbid companies to whom the legislation applies from purchasing 3TG minerals mined in areas governed by armed groups in the DRC or its neighbours. The possibility for punishment is linked instead to the obligation for companies to report on their sourcing; these obligations themselves "are contingent on the soundness of due diligence practices, i.e. unsatisfactory due diligence leads to insufficiently substantiated

claims about the origin and chain of custody of the minerals, and hence to unsound reporting and flawed disclosure." (IPIS, 2020a, p. 7) Consequently, Dodd-Frank 1502 has an important element of naming and shaming. The expectation is that companies will avoid purchasing 3TG minerals from conflict-affected areas of the DRC and the rest of the region to ensure that they do not suffer reputational damage in the eyes of investors and consumers (ibid).

In response to Dodd-Frank Section 1502, industry associations responded by joining forces with the OECD Investment Division's Responsible Business Conduct Unit to create supplements, focused on the 3Ts and gold, for the OECD Due Diligence Guidance (IPIS, 2020a, p. 7). The supplements included the concept of mineral supply-chain "choke points", which are "key points of transformation that include relatively few actors that handle or process the material and have higher visibility and control over upstream stages (e.g. production and trade)." (ibid) For the 3Ts, smelters are the choke points, while for gold the choke points are refiners. Audit programmes like the RMI's Responsible Minerals Assurance Process for smelters and refiners of the 3TGs and, for gold, the London Bullion Market Association's Responsible Gold Guidance and the Responsible Jewellery Council's Chain-of-Custody Certification for refiners were created, among other reasons, to meet Dodd-Frank Act 1502 requirements for businesses (idem, pp. 7-8).

While, as discussed above, Dodd-Frank Section 1502 has been singled out for significant critique as well as for praise with respect to its on-the-ground impact, other measures for responsible sourcing and/or formalization (IPIS, 2020a, p. 18) were put into place at the same time that Section 1502 was implemented, which means that it is not possible to assess the Act's effects fully in isolation of other initiatives. Yet it is clear that the Dodd-Frank Act created significant momentum on the interlinkages between armed conflict and mineral exploitation and sale, and towards increased efforts to trade minerals in a responsible manner. Section 1502 also speeded up the creation "and implementation of several other initiatives (including certification mechanisms, traceability programs, and validation of mining sites)" (IPIS, 2020a, p. 18). While the negative impacts of Dodd-Frank and associated measures on the region have been well documented, some actors in the Congolese mining space see a need for more responsible sourcing initiatives in the DRC, not fewer. IPIS (2020a), for instance, notes that – as mentioned above – most of these programmes exist for the 3Ts and that there are only "a few pilot traceability projects for ASM gold", which unlike in the 3T sector are geographically restricted and consequently have limited impact." (IPIS, 2020a, p. 18)

The SEC organized hearings to assess the impact of Dodd-Frank (Financial Services Committee, 2014) and invites public comments via its website (U.S. Securities and Exchange Commission, n.d.). A key development came in 2017 when then-President Donald Trump vowed to enact a suspension of the Dodd-Frank Act's Section 1502. Also that year, the

Securities and Exchange Commission (SEC) in the US made the decision to halt the enforcement of the law's most expensive requirements. This means that it was no longer compulsory for companies to carry out an audit or due diligence review, but they were still required to file the necessary forms with the SEC and to inquire about the origin of minerals. The Responsible Sourcing Network (RSN) has reported in turn that as a result of this change, companies began to invest less energy in due diligence for 3TG supply chains (IPIS, 2019, p. 19).

The DRC's regulatory framework

In this section we highlight some regulatory initiatives in the DRC. Since ethical supply chain regulation has been a concern for about the past two decades, we start with the previous Mining Code, which was adopted in 2002, just before the official end of the second war (Geenen, 2015). The Mining Code and subsequent Mining Regulations differentiate between three modes of production, subject to different tax regimes and permit systems: industrial mining, small-scale mining and artisanal mining. The following public services govern the mining sector at the national level: Ministry of Mines, Directorate of Geology, Directorate of Mines, Directorate for the Protection of the Environment and Mining Registry (*Cadastre Minier*). At the provincial level there is a Ministry of Mines too, with its administrative service, the Provincial Mining Division. Finally there are a number of technical services: CTCPM (*Cellule Technique de Coordination et de Planification Minière* or Technical Coordination and Planning Unit), CEEC (*Centre d'Evaluation, d'Expertise et de Certification des substances minérales précieuses* or Center for Evaluation, Expertise and Certification) and Saesscam (*Service d'Assistance et d'Encadrement du Small-Scale et Artisanal Mining* or Service for Assistance to Small-Scale Mining), now known as SAEMAPE.

International pressure combined with persistent concerns around smuggling and illegal trade prompted the Congolese government to implement different initiatives too. The Ministère des Mines and Ministère des Finances (2009) issued a handbook (*Manuel des procédures*) containing detailed instructions on all the steps to be taken and all actors and services involved in tracing the origins of minerals, certifying and taxing them (for a more detailed discussion, see Buraye et al., 2013). The handbook also establishes the routes minerals should take from the mine to the export office, passing through *centres de négoce* or centralised trading points. In these trading points, miners are required to sell their products to registered traders under the supervision of the mining services, who issue certificates and levy taxes. Around 2010, pilot trading points were set up in South Kivu (Baraka and Mugogo) and in North Kivu (Itebero, Isanga and Rubaya), but they were never very successful (Geenen & Custers, 2010).

In 2010 the national government made a radical attempt at accelerated implementation of these laws by temporarily – for six months – banning all artisanal mining activities by ministerial decree (20 September 2010) (Geenen, 2012). The decree (Ministère des Mines, 2010a) mentioned four official reasons for the ban: cutting the financing of non-state armed

groups, re-establishing state control, fighting against fraud and fighting against the involvement of "non-authorised people" in the sector. A second decree (Ministère des Mines, 2010b) establishing a set of "accompanying measures" to move towards formalisation was issued on the same day. In sum, the mining administration was instructed to make an inventory of all mineral stocks and ensure these were not exported, and to send their agents inland to identify all operational sites and actors. The miners for their part were required to stop exploiting, to sign up for registration and to organise in cooperatives as required in the Mining Code. Yet as Geenen (2015) notices hardly any additional financial, human or material resources were transferred to the services that were supposed to implement these measures. When the ban was levied in March 2011 the government promised to further execute the accompanying measures and set up a timetable with fixed objectives and operational guidelines (Ministère des Mines, 2011). Yet weak capacities and poor resources delayed their implementation (on the miners' cooperatives, see Byemba, 2020; De Haan & Geenen, 2016; Iguma Wakenge et al., 2021).

On 29 February 2012 the ICGLR's RCM was adopted into Congolese law by ministerial decree (Ministère des Mines, 2012). Around this time the Congolese government also started "mapping" exercises to locate and informal ASM sites and categorize them as complying with all regulations or not. Sites were validated as green, yellow, or red, starting with 46 mine sites in North and South Kivu in March 2012. Yet once again, lack of resources, persistent insecurity and the sheer magnitude of such a mapping and validation operation hindered the sustainability of this initiative. The most comprehensive and sustainable effort was (and is still) externally financed and carried out by the Belgian research center IPIS (Hilgert & Spittaels, 2013).

In 2018 a new Mining Code (Gouvernement de la RDC, 2018c) and new Mining Regulations (Gouvernement de la RDC, 2018a) were adopted. In matters of traceability and certification, the Mining Regulations refer to relevant regional and international norms. The Ministry of Mines, relying on the Cadastre Minier and SAEMAPE, must make sure that all mining sites are mapped. The CEEC has an important role to play in traceability and certification. CEEC "organises the traceability office to ensure conformity with all traceability formalities required to determine, for each consignment ready for export, the nature, physical and/or chemical characteristics, origin and legal and lawful sourcing of the minerals. This conformity check gives rise to the drawing up of a certificate of origin of the mineral substances", which is needed for export (Gouvernement de la RDC, 2018a, p. 7). CEEC is also tasked with ensuring the coordination of all supply chain initiatives (Gouvernement de la RDC, 2018a, pp. 42-43). According to the Mining Regulations the provincial governor is responsible for the creation of new centralised trading points (Gouvernement de la RDC, 2018a, p. 44).

In Kolwezi (Lualaba province), for instance, the Musompo *centre de négoce* was inaugurated in August 2020. Aiming to eliminate clandestine *comptoirs* that purchase minerals, the *centre de négoce* aims to provide a modern structure to bring together sellers and buyers of

artisanally-mined minerals in order to exercise better oversight over the trade in cobalt. Then-Governor Richard Muyej explained the intention to close and demolish all the clandestine *comptoirs* and depots. According to DeskEco (Mwarabu, 2020), this measure is part of a broader set of reforms being implemented, by the governor, in the artisanal mining sector in Lualaba. The reform's key objectives are said to be to: halt "anarchic" construction in both residential and industrial sites; create a programme for displacing artisanal miners towards the Artisanal Exploitation Zones (ZEA) outside of which cooperatives are not supposed to operate; create *centres de négoce* where sellers and buyers of artisanally-mined cobalt that originated at ZEA can meet to conduct business; find a solution to the systematic challenges related to ascertaining cobalt's mineral content, humidity, and dry weight by setting up independent laboratories to carry out certification; ensure that minerals are traced physically and through documentation from the mine pit to the *centre de négoce*; prevent the spread of illicit mineral-buying depots in different areas, including residential neighbourhoods, along the road, and within private mining concessions; and establish a *guichet unique* (single window) to ensure proper recovery of taxes and fees (Mwarabu, 2020). These objectives therefore involve increased formalization and greater government oversight and control of the sector.

It is clear that the regulatory tsunami flooding Eastern DRC between 2010 and 2020 has now reached the Southeast and targets cobalt, the newly declared "strategic mineral". The new Mining Code already foresaw the possibility of declaring certain minerals to be "strategic" and subject to special regulations "in view of the geostrategic context" (Gouvernement de la RDC, 2018c, p. 15). In November 2018, this became the case for coltan, cobalt, and germanium. One year later, ARECOMS (A*utorité de regulation et de contrôle des marchés de substances minérales stratégiques*) was created under the authority of the Minister of Mines but with financial and administrative autonomy (Gouvernement de la RDC, 2019). Its attributions are to regulate and control the production and export of strategic minerals.

Another crucial development in this regard is the creation of the *Entreprise Générale du Cobalt* (EGC) as a subsidiary of the state-owned mining company Gécamines. EGC announced in November 2020 that it had entered into a trading agreement with commodity trader Trafigura (Trafigura, 2020). On March 31st, 2021 the DRC officially launched EGC as the new state buyer of artisanally-mined cobalt. The same day, EGC made an announcement regarding a responsible sourcing standard – developed in collaboration with Trafigura – to be implemented across artisanal-mining sites. EGC, which will be in charge of formalizing the ASM cobalt sector, will be the only purchaser of artisanal cobalt authorized by the law and will purchase, process, and market all of the DRC's artisanally-mined cobalt. Albert Yuma, then-chairman of Gécamines, explained that EGC's operations would fully begin in mid-April and that the organization would allow for a six-month grace period. According to Yuma, the EGC would end the illegal export of cobalt, which prevents the DRC from collecting tax revenue, and address artisanal miners' exploitation (Reuters Staff, 2021). The DRC government made the move to create EGC in order to promote formalization and

secure greater economic returns from the ASM sector for the state, as well as in response to the increasing pressure on the government to address risks in the ASM cobalt sector, most notably child labour. “In a recent press release, civil society organizations in DRC and Lualaba called for greater transparency from EGC, as well as Trafigura and its implementing partner PACT as pertains to roles, costs and finances related to EGC operations” (Coordination des actions de la société civile, 2021, p. 5).

The European Union’s Conflict Minerals Regulation

As early as 2009 the European Commission created a "Task Force on Illegal Exploitation and Trade in Natural Resources" (the Belgian government, by comparison, had implemented a similar measure even earlier, in 2007). The task force was chaired by the EU Special Representative for the Great Lakes Region, Mr Roeland Van de Geer, and was meant to be an informal platform for exchange of ideas around how to end illegal mineral exploitation and trade (Geenen & Custers, 2010). After the adoption of the Dodd-Frank Act, the discussion around its unintended effects in Congolese mining communities led to an extensive debate in the EU. The design of the EU regulation was meant to prevent some of these negative effects, notably by extending the geographical scope and not restricting its reach to DRC and the neighbouring countries. Two other significant differences are that the EU regulations are restricted to 3TG importers and refiners, they do not include downstream manufacturers and sellers; and the shift from a compliance-based to a risk-based approach (Koch & Burlyuk, 2020). In terms of **participation**, in 2013 the EU organized a broad consultation on the potential adoption of the regulation. Koch and Burlyuk (2020) report that over 250 companies, NGOs and researchers filled in the questionnaire. The authors highlight that the “against-regulation coalition” highlighted the negative consequences of Dodd-Frank, with 49 respondents using the term “trade embargo”. After this public consultation the European Commission also made an ex-ante impact analysis (idem).

The EU calculated in 2014 that EU Regulation 2017/821’s compulsory requirements would involve direct coverage of over 300 traders, 100 smelters or refiners, and 100 finished-goods manufacturers. Through trickle-down effects on their suppliers, a significant number of firms would in turn be indirectly affected (Deberdt & Billon, 2021, p. 11). The first regulation proposed by the European Commission was voluntary, which sparked intense campaigning by NGOs as well as Catholic bishops and Nobel-prize winner Denis Mukwege (Koch & Burlyuk, 2020). As a consequence, the Parliament ultimately voted for mandatory due diligence requirements for both importers of raw materials and products containing those materials, in May 2015. After the vote, the Council of Ministers started negotiating and adopted a proposal in 2016. The final regulation was adopted in 2017, to come into force in 2021. The regulation also announced the adoption of “accompanying measures” to enhance its effectiveness (EurAc, 2017, p. 22). One of these accompanying measures is the **European Partnership for Responsible Minerals (EPRM),** which is a multi-stakeholder partnership with

the goal of increasing "the proportion of responsibly produced minerals from conflict-affected and high-risk areas (CAHRAs) and to support socially responsible extraction of minerals that contributes to local development." (The European Partnership for Responsible Minerals (EPRM), n.d.-a).

The Conflict Minerals Regulation on its own is not considered sufficient to enact meaningful change in mining areas; consequently, the EPRM provides support to mine sites located in CAHRAs, with the objective of helping more mines ensure compliance with the OECD Due Diligence Guidance standards. EPRM's stated vision is to increase the share of minerals, particularly artisanally-mined minerals, that are responsibly mined and procured, in keeping with international standards and frameworks. In terms of its mission, the EPRM seeks to better mining (particularly ASM) practices at the local level, improving mine workers' and communities' economic, environmental, and social circumstances. This includes giving actors in the supply chain the needing knowledge or tools to implement internationally-compliant due diligence practices (The European Partnership for Responsible Minerals (EPRM), n.d.-a). EPRM funded projects in DRC include incident monitoring and training of miners' cooperatives (IPIS' Kufatilia project with the Expertise Center on Mining Governance, known as CEGEMI), and Artisanal Mining Women's Empowerment Credit & Savings project (AFECCOR) (The European Partnership for Responsible Minerals (EPRM), n.d.-c).

The European Union's Batteries Regulation

In a December 2022 press release, it was announced that the European Union had come to an agreement on a new law "on more sustainable and circular batteries" to support the energy transition, as well ensure the competitiveness of industry. According to the European Commission, this represented a provisional political understanding between the EU Parliament and Council, with the objective of enhancing the sustainability, circularity, and safety of any batteries entering the EU market. This agreement between the parties is based on a December 2020 proposal by the Commission and focuses on environmental, economic, and social issues with respected to all battery types (European Commission, 2022). The European Commission held a series of consultations with the public and with stakeholders (Halleux, 2021, p. 5). This included a public consultation lasting 12 weeks, in addition to consultation with experts from the member states; stakeholders; and representatives from relevant NGOs. These measures were accompanied by meetings of expert groups, and targeted interviews (European Commission, 2020a). In June 2023, the European Parliament voted a resolution accepting the 2020 proposal of the European Commission for a Battery Regulation.

The International Conference of the Great Lakes Region

The ICGLR was created as a platform for dialogue between the countries of the region. In 2006, a Pact on Security, Stability and Development in the Great Lakes Region was signed, containing the "Protocol on the fight against the illegal exploitation of natural resources" (Article 9). German development cooperation GTZ, which has supported the process from the beginning, chose the issue of natural resources as a priority. After the identification mission, the various national experts were brought together in April 2009 in Bujumbura to discuss the implementation of the recommendations. The following elements were identified as priorities: development of a database on regional trade in natural resources, collaboration with EITI, proposal for revision of the law, denunciation mechanism, certification of minerals and harmonisation of the taxation system (Geenen & Custers, 2010).

The Regional Initiative against the Illegal Exploitation of Natural Resources (RINR) was eventually adopted in Lusaka in 2010. This scheme is made up of six instruments to combat illegal natural resources exploitation, the first of which is the creation of a Regional Certification Mechanism or RCM (Garrett et al., 2015). As mentioned below the RCM was integrated into Congolese law in 2012 (as well as in Rwanda, and much later also in Burundi and Tanzania). In 2019 the mechanism was revised following a “comprehensive review” carried out by consultancies Levin Sources and Responsible Trade, and financed by GTZ. Levin Sources reports that “the new manual integrates some major changes including a narrower focus of the mechanism on conflict and serious human rights violations, the removal of redundant or overly costly functions and greater emphasis on the importance and value of industry due diligence schemes in keeping clean minerals flowing, even where Member State checks are not in place” (Levin Sources, n.d.-c).

When it comes to **transparency** and **participation**, additional research is needed to complement the readily available information. According to its website, the ICGLR has public fora for civil society (La conférence Internationale sur la Région des Grands Lacs - CIRGL, n.d.), women (La conférence Internationale sur la Région des Grands Lacs - CIRGL, n.d.-a), and youth (La conférence Internationale sur la Région des Grands Lacs - CIRGL, n.d.-b).

3TG and cobalt-specific multi-stakeholder initiatives

The CRAFT Code

The Code of Risk mitigation for Artisanal and small-scale miners engaging in Formal Trade (CRAFT) can be understood in the context of the growing knowledge regarding the shortcomings of approaches that focus only on compliance, which has led to higher-level disengagement or even boycotting of CAHRAs, thereby negatively affecting livelihoods and propelling small-scale producers into informality. The CRAFT Code is a tool to enable due

diligence in supply chains of ASM minerals. This and other initiatives "are aimed at lowering barriers to market entry, especially for small-scale producers, promoting instead engagement, continuous improvement and accompanying supporting measures and capacity-building of suppliers." (Levin Sources, 2021a) The OECD strongly favours this approach (idem, p. 4). The CRAFT Code is an initiative of the Alliance for Responsible Mining (ARM) and the NGO RESOLVE, and applies to the upstream segment. CRAFT's objective is to facilitate downstream actors' engagement with upstream actors in the location where the mitigation of OECD Due Diligence Guidance risks takes place (Levin Sources, n.d.-b, p. 58).

The risks included in the CRAFT Standard go beyond the OECD DDG's Annex II (Levin Sources, n.d.-b, p. 58). The CRAFT Code is freely available under a Creative Commons license (The Alliance for Responsible Mining (ARM), 2020). ASM miners can therefore – at least in theory – use it at no cost and alongside other assurance programmes, which lowers the burden of audits for them and simplifies the due diligence process, making compliance more feasible (Levin Sources, n.d.-b, p. 58). According to Levin Sources (ibid), "CRAFT looks like the most complete and comparable to the expectations of the market. It might be feasible to implement in the DRC […] given that it is open source and based on progressive improvement." Stakeholders who support the CRAFT Code indeed tend to refer to its "progressive improvement and investment structure" (RESOLVE, 2021). The fact that with the CRAFT Code, costs are also paid by downstream actors is another advantage (Levin Sources, n.d.-b).

Regarding **participation**, the CRAFT Code was designed by a multi-stakeholder alliance, including artisanal miners from five countries. Stakeholder consultations were carried out with over 400 individuals from various stakeholder groups, including mining communities. Furthermore, the code encourages participation: it is praised for having fewer capacity constraints for artisanal miners compared to the standards of most international certification initiatives, as it is less costly and time consuming and does not require specific training. Any individual can access and adapt the code through a Creative Commons open source, reducing the audit burden which often outsources responsibilities from buyers to miners, and encouraging engagement between upstream and downstream actors (Levin Sources, n.d.-b).

The ASM Cobalt Framework

The ASM Cobalt ESG Management Framework, or the ASM Cobalt Framework as it is typically referred to, is "a set of progressive requirements with the goal of helping to build a more inclusive and responsible cobalt supply chain." (IMPACT & RESOLVE, 2021) The ASM Cobalt Framework was created, conferred on, and backed by actors in the global cobalt supply chain; governments; international and non-governmental organizations; and stakeholders involved with cobalt. The draft ASM cobalt framework was originally created

by the Fair Cobalt Alliance's founding members (Responsible Cobalt Initiative (RCI) & The Global Battery Alliance's Cobalt Action Partnership (GBA CAP), 2021). The ASM Cobalt Framework entails a series of environmental, social, and governance expectations for ASM sites in keeping with the appropriate Congolese legislation and regulations, the OECD Due Diligence, and the *Enterprise Générale du Cobalt* (EGC) Standard, "with progressive levels of achievement formed to help sites meet these expectations over time and with assistance." (IMPACT & RESOLVE, 2021, p. 6) The Framework was developed based "on the fundamental principal [sic] of pragmatic, continuous improvement to ensure its applicability and viability, rather than setting impossibly high hurdles to market entry that risk excluding the very communities that need support." (The Cobalt Action Partnership et al., 2021, p. 2) During the development process, standards reviewed included Certified Trading Chains (CTC); the EGC Responsible Sourcing Standard; CRAFT; the Fairtrade Standard for Gold and associated Precious Metals for Artisanal and Small-Scale Mining; the OECD Due Diligence Guidance; the Chinese Due Diligence Guidelines; and the Cobalt Standard (IMPACT & RESOLVE, 2021).

The ASM Cobalt Framework is structured around seven central principles: sound organizational governance; the respect of workers' rights; respect for and compliance with the law; the safeguarding of occupational health and safety for workers; making a contribution to community development; environmental protection and natural resource stewardship; and transparent and fair trade. For each of the seven principles, in turn, the associated expectations are presented as requirements, with four associated levels: prerequisite, pre-investment (basic), continuous improvement, and best practice. The idea is that if mining cooperatives are able to move forward with implementing improvements, such as pre-investment, then market players will provide investment to and work with mining cooperatives "to collectively achieve the more financially intensive improvements." (Responsible Cobalt Initiative (RCI) & The Global Battery Alliance's Cobalt Action Partnership (GBA CAP), 2021, p. 3)

In 2020, the Responsible Cobalt Initiative (RCI) delegated to The Impact Facility (TIF) the task of further developing the draft ASM cobalt framework. The RMI and the CAP then received the resource for consultation purposes in order to provide feedback and to foster the "development of a common set of global expectations for responsible-produced cobalt across the supply chain." (Responsible Cobalt Initiative (RCI) & The Global Battery Alliance's Cobalt Action Partnership (GBA CAP), 2021, p. 1) Since then, RCI and CAP have organized preparatory meetings with key Congolese and global participants, "benchmarked the framework against relevant DRC standards and laws as well as other ASM standards," (ibid) and made modifications based on stakeholder comments. Two facilitator NGOs, RESOLVE and IMPACT, were contracted by CAP to coordinate with RCI and carry out stakeholder consultations, and to publish their findings in a final report. RESOLVE and IMPACT have pointed to the need for all the stakeholders in the cobalt supply chain, upstream and downstream, to reach agreement "on the threshold (minimum acceptable procurement

requirement) for ASM cobalt," (ibid) followed by directing funding and providing technical assistance for improvements at mine sites. These investments should take place alongside consistent monitoring and evaluation against the ASM Cobalt Framework with its "clear, viable, and progressive requirements" (ibid). The stakeholder consultation aimed to gather input in order to develop a shared, universal series of expectations for the responsible production of ASM cobalt, "that achieves progressive, measurable improvements of miners' working conditions and livelihoods and provides a globally recognized threshold for acceptability of cobalt by the entire value chain." (idem, p. 2)

In 2021, the GBA CAP published a report from the stakeholder consultations on the ASM cobalt framework (IMPACT & RESOLVE, 2021). The Responsible Cobalt Initiative, meanwhile, was carrying out consultations in Chinese, also with the intention of combining and sharing its findings. The global consultation was held in June and July 2021, in Lubumbashi, Kolwezi, and Kinshasa, through workshops, interviews, focus groups, and small group meetings. The consultations aimed to allow a sizable and representative group of ASM actors, including from neighbouring communities, to provide direct input into the process. Stakeholders from the DRC could also provide comments online.[1] The consultation also includes an international component to allow input from "global industry, civil society, multi-stakeholder initiatives, and other international organizations" (Responsible Cobalt Initiative (RCI) & The Global Battery Alliance's Cobalt Action Partnership (GBA CAP), 2021, p. 3). The consultation involved 145 organizations, Congolese and international. Participants raised concerns and questions but also said they were willing to pursue constructive engagement with the ASM Framework, a willingness that those carrying out the consultation linked to "[t]he Framework's progressive improvement and investment structure" (IMPACT & RESOLVE, 2021, p. 4). According to the findings, "concerns about GBA governance, transparency, and decision making are currently a barrier for some stakeholders' current level of appetite to engage deeply in the Framework." (idem, p. 13) The consultation also highlighted that there needs to be greater coordination between different supply-chain and development schemes, not only with the objective of fulfilling due diligence requirements but also to assist in tackling the underlying causes "of unsafe and informal mining and child labor." (idem, p. 5) Given the multiple actors and initiatives involved in these efforts, as shown in this mapping report, there is significant scope for improving collaboration (idem). The consultation also revealed the need to clearly define supply chain actors' responsibility and seek additional means to fundraise for investment in the governance of cobalt ASM, with the objective of improving working conditions, enabling ASM actors to gain "access to the legal market." (Responsible Cobalt Initiative (RCI) & The Global Battery Alliance's Cobalt Action Partnership (GBA CAP), 2021, p. 3) NGOs are seen as having an important role to play, particularly at community level, to hold the private sector accountable and ensure that it invests (idem).

[1] It should be noted that as of June 2023, the consultation website - https://www.asm-cobalt.org/ - appears to be no longer functioning, after multiple attempts to access the site.

The Framework provides an example of how stakeholder participation in the design phase can be carried out through various forms of stakeholder consultation, ranging from interviews and focus groups to the organisation of workshops. However, the report by IMPACT and Resolve (2021) also reveals stakeholders' critiques related to accountability, transparency and participation, demonstrating how a lack of **participation** and **transparency** can lead to legitimacy gaps.

One of the key take-aways from the report by IMPACT and Resolve (2021) concerns a lack of transparency and participation in the CAP's decision-making processes. Stakeholders from the DRC were not involved in the initial design and draft of the framework, which led to a sense of skepticism and hostility towards the Framework. CAP recognized this lack of participation and the corresponding effects on stakeholders' reception of and perceptions about the Framework, and intentionally aimed to work towards a "respectful partnership" during the following phases of the consultation process. These efforts were appreciated by DRC stakeholders and eventually contributed to a more positive sentiment towards the framework, according to the findings in the report (IMPACT & RESOLVE, 2021, pp. 4-9).

The report also highlights that there is a more general lack of understanding, and hence a sense of caution, about the GBA, CAP, RCI and FCA, including how these different initiatives relate to each other. This includes critiques by international civil society on GBA's conflicts of interest, the limited participation of civil society and therefore the lack of meaningful multi-stakeholder governance, and the lack of transparency in decision-making processes (IMPACT & RESOLVE, 2021, p. 12) In addition, "CAP and the GBA's internal governance and communications' challenges are legacy issues that continue to frustrate members." (idem, p. 28)

3TG and cobalt-specific industry responsible sourcing frameworks

The London Bullion Market Association Responsible Sourcing Programme

The London Bullion Market Association (LBMA) is a trade association that represents the gold and silver wholesale market. Among the members of the LBMA are "central banks that hold gold reserves, investors, mining companies, producers and refiners." (Manhart & Schleicher, 2013, p. 49) The LBMA maintains a Good Delivery List, which is a standard for the quality of gold and silver. Since 2012, refineries on this list also need to comply with the LBMA Responsible Gold Guidance. This Guidance is one of those that was established, among other reasons, in order to meet corporate requirements under Dodd-Frank Section 1502 (IPIS, 2020a). The LBMA's Responsible Gold Guidance, which applies to the midstream and downstream, implements "requirements for refiners producing LBMA Good Delivery gold bars to combat human right [sic] abuses, avoid conflict, and comply with high

standards." (Levin Sources, n.d.-b, p. 55) It adheres to the OECD Guidance's five-step framework.

Inscribed in broad industry efforts to address and mitigate supply chain risks, the LBMA, alongside the RMI and the RJC, began establishing cross-recognition mechanisms. In 2012, the three organizations announced mutual cross-recognition of independent, third party gold refiner audits, in order to reduce duplication for refiners. This strategy allowed supply chain actors to partly avoid audit fatigue. In 2017, after an alignment assessment with the OECD Guidance, the three organizations reshaped their standards and their cross-recognition policy. As of 2022, the cross recognition covers the LBMA Responsible Gold Guidance, the RMI Responsible Minerals Assurance Process Gold Standard, the RJC Chain-of-Custody (CoC) Standard (provision 1 only), the RJC Code of Practices (COP) Standard (provision 7 only) (Responsible Minerals Initiative (RMI), n.d.-a) It should be noted that in 2021, Google had given RMI funding to develop a cross-recognition platform for the cobalt sector that would better allow stakeholders across multiple sectors to work together, assess interventions' impacts, and communicate in a more transparent manner "the cumulative actions of downstream investments and NGOs working in the sector." (Google, 2022, p. 31)

Our analysis provided relatively few insights on transparency and participation in the process of establishing and monitoring the programme, though LBMA's 2022 Sustainability and Responsible Sourcing Report referred to "several consultations asking for feedback on our next version of the Good Delivery List Rules, the Global Precious Metals Code, the Disclosure Guidance to support the Responsible Sourcing Programme, and soon the Third Party Audit Guidance." (London Bullion Market Association (LBMA), 2022, p. 8) The 2021 report, meanwhile, noted that "the development of the Responsible Gold Guidance (RGG) Version 9 afforded extensive consultation with refiners and a broad range of stakeholders, including Good Delivery List (GDL) refiners, industry partners and international organisations." (London Bullion Market Association (LBMA), 2021, p. 8)

Critiques related to the LBMA Guidance include its ease of implementation when it comes to ASM gold specifically. Levin Sources (Levin Sources, n.d.-b, p. 55) note that it is typically easier for a corporate actor to purchase ASM gold and become LBMA certified than would be the case with the [Responsible Jewellery Council] Code of Practices. Many actors, especially from civil society, have pushed for LBMA members to consent to receive ASM gold that has been mined in a "legitimate" manner. So far, however, Good Delivery List refiners only accept to take "legally"-mined ASM gold which means at the very least that the ASM miners are legally allowed to work at the sites where they operate, that they sell to actors who are legally allowed to buy minerals, and that all relevant, legal levies and taxes have been paid in the process (Mthembu-Salter & Salter, 2022, p. 16). The debates that have taken place on this issue between members of the LBMA and campaigners from the

NGO world, as noted above, are “part of a broader debate between compliance-focused and continuous improvement/risk mitigation-focused approaches.” (idem, p. 21)

The LBMA has recently become involved in concrete cases of human rights abuses at mine sites. It was reported in March 2022 that the LBMA was examining claims by the UK-based human rights NGO RAID that killings and other human rights abuses had occurred at the North Mara, Tanzania, gold mine of the Canadian mining company Barrick Gold. RAID had submitted a complaint in writing to the LBMA, under its review process, on March 23. In their complaint RAID alleged that since September 2019, police assigned to the mine killed four residents of the area and severely wounded seven others. According to LBMA rules, when the association “becomes aware of potential serious breaches to its guidelines”, it then initiates “a formal “Incident Review” process”. A spokesperson for the LBMA said that the association takes such allegations seriously and would be reviewing the letter from RAID (Whitehouse, 2022).

The Responsible Jewellery Council’s Chain of Custody Standard and Code of Practices

Knowing that they were vulnerable to critiques around conflict minerals and building on their previous experience facing advocacy around “blood diamonds,” “14 jewellery companies, industry associations, and mining companies came together to protect the collective reputation of the industry” by developing the Responsible Jewellery Council (RJC), i.e. their own private governance initiative (Bloomfield & Manchanda, 2023, p. 8). The RJC covers diamonds, gold, silver, and platinum group elements (PGE). The relevant sustainability standards are the Code of Practices (COP) and the Chain-of-Custody Standard (CoC). The RJC’s CoC standard is “the most prominent private governance standard” “[a]t the downstream end of the supply chain” (ibid).

The RJC was founded in 2005 as the Responsible Jewellery Practices Council and then renamed the RJC in 2008. RJC was the first scheme established beyond the mine site and by downstream supply-chain actors including manufacturers and end producers. RJC’s prominence and wide value chain coverage can be seen in its approximately 1400 corporate members (“mainly jewellery, watch manufacturer and wholesaler”) and more than 8000 certified facilities. Yet there is little upstream RJC implementation, “with only seven COP-certified mines of diamonds, coloured gemstones and precious metals (two additionally CoC-certified).” (BGR, 2022, p. 20)

Critiques of RJC include the fact that, according to Human Rights Watch (2018), RJC membership does not guarantee that the jewelry sold by a company has been sourced responsibly. Human Rights Watch argued that there are problems with “[t]he RJC’s governance, standards, and system of audits,” which means that even firms that do not live up to key human rights standards are able to become certified by the RJC (Human Rights

Watch, 2018, p. 32). Important critiques relate to **participation**. RJC is condemned for its "carefully limited stakeholder engagement where NGOs are invited to participate but have no real power of influence" (Bloomfield & Manchanda, 2023, p. 8). RJC's CoC started as an industry standard and, according to some observers, still remains industry-led (idem; (Human Rights Watch, 2018, p. 13).

The board of the RJC is made up of 25 representatives from industry located at different steps in the supply chain (BGR, 2022, p. 18). The board appoints RJC's CEO, approves the body's new or updated certification models and standards, and makes other important decisions. The RJC does confer with civil society actors and its standard-setting committee includes civil society representatives, but at its core it is fundamentally an industry organisation. Its decision-making organs do not have representation of consumer bodies, mining communities or miners' associations, trade unions, or human rights NGOs (Human Rights Watch, 2018, p. 33).

When it comes to **transparency**, RJC members are not required to publicly release the findings from RJC audits. It has been alleged that when these audits are carried out, they are dependent on information provided by companies (Bloomfield & Manchanda, 2023, p. 8). When it comes to making audit findings transparent, the requirement under the RJC framework is for "[s]ummarized superficial results only with general rule violations" (BGR, 2022, p. 17). This has been classified as low transparency, while RJC is rated high for other criteria (BGR, 2022).

The World Gold Council, the Conflict-Free Gold Standard, and the Responsible Gold Mining Principles

The World Gold Council is an industry body that fosters gold mining and investment in gold. The WGC represents the interests of the 26 of the world's biggest gold-mining firms that are dominant upstream of the supply chain. Faced with the risk to their reputations of "conflict minerals" as well as upcoming legislation in the US, the WGC created "an industry-wide code of conduct for its members." (Bloomfield & Manchanda, 2023, p. 7) Therefore, while activists were able to push business actors into formulating a response, industry has been able to determine exactly what the response looks like (ibid).

The Conflict-Free Gold Standard (CFGS), while industry designed and run, nonetheless gathered a high level of support, including by the UK's Department for International Development, and the NGO Global Witness. The standard's creators knew they had to attain a minimum of legitimacy among outside stakeholders. The WGC has argued that development of the CFGS involved thorough consultation with actors from government, civil society, and supply chains, and puts into operation the OECD Due Diligence Guidance (Bloomfield & Manchanda, 2023, pp. 7-8).

Critiques on the standard, however, include its inability to deal with root causes of conflict or effectively help small-scale miners. The WGC and its standard act on behalf of large-scale mining firms, whose workforce is less than 15% of those whose livelihoods directly depend on mining. The WGC does not supervise or auditor the CFGS's application, arguing that certifying its own members could constitute a conflict of interest. As a result, however, it is companies that control, and do not share, data gathered and evaluated during the audit procedure. The response to concerns around gold mining therefore followed the industry's already-existing pathways, namely an industry body, and the resulting standard, while in line with international benchmarks, is tailored to the needs of industry (Bloomfield & Manchanda, 2023, pp. 7-8).

The Responsible Minerals Initiative's Responsible Minerals Assurance Process

Now formed by more than 400 members, the Responsible Minerals Initiative (RMI) provides support to corporate actors in addressing risks in their mineral supply chains. The Responsible Minerals Assurance (RMAP) focuses on the midstream (aka the smelters and refiners) and has, since 2017, expanded significantly to new minerals and metals, including cobalt, zinc, copper, and mica among others. The "RMAP Standard uses an independent 3rd party assessment to validate conformance with the due diligence management systems set by the Standard." (Levin Sources, n.d.-b, p. 56). For cobalt, for instance, audits are undertaken at DRC refineries, i.e. crude refiners that engage in the production of intermediate products, and at international refineries where cobalt chemicals or metal are produced. According to the DRC Mining Code of 2018, this first transformation into cobalt hydroxide is a requirement for exports and a strategy embraced by the country to retain value added inside its borders. According to RMI, "[t]he first audits at both levels have been carried out and the first refineries in China, Belgium, Finland and the DRC have been listed as compliant" (BGR, 2021, p. 4).

RMAP is aligned with the OECD Guidance and is "based on a risk-based assessment program for smelting and refining facilities in 3TG and cobalt supply chains." (Levin Sources, n.d.-b, p. 56) While RMAP is applicable to the midstream of the supply chain, RMI received requests from downstream firms, in response to which it introduced a downstream audit programme. Therefore RMAP was completed in 2016 by the Downstream Assessment Program which required participating companies beyond the minerals transformation stage to provide information on their risk mitigation measures' alignment with the OECD Guidance.

Beyond the RMAP, the RMI provides a flurry of supporting mechanisms and tools, such as an audit programme and a reporting template. The Conflict-Free Smelter Program (CFSP) was created in 2008 as an audit programme for 3TG smelters and refiners, and acted as the de facto system for companies to align their sourcing practices under the upcoming Dodd-

Frank Act (IPIS, 2020a). In 2017 the programme was rebranded to the Conflict-Free Smelter Initiative (CFSI) to better account for a growing scope of minerals covered by the audits. The reporting template, the Conflict Minerals Reporting Template (CMRT) is widely used by companies to comply with US or EU regulation, as well as companies surveying their suppliers independently. The template was also tailored to the cobalt sector with the Cobalt Reporting Template (CRT), now known as the Extended Minerals Reporting Template (EMRT) covering both cobalt and mica. To support the risk assessment of its members, the RMI also ~~embraced~~ the Risk Readiness Assessment (RRA), an Apple-developed self-assessment tool addressing risks in mineral supplies. Finally, the organization also developed a Minerals Grievance Platform (MGP) providing participating parties with grievance information aligned with the OECD Guidance Annex II Risks covering 23 minerals, from iron ore to cobalt, lithium or palladium.

Starting in 2016 when cobalt first came to widespread attention, a range of programmes, led by industry, had begun advocating for the OECD Guidance's far-reaching adoption for cobalt supply chains.

The Responsible Cobalt Initiative

As mentioned above, the China Chamber of Commerce or CCCMC was founded "by various economic organizations engaged in manufacturing, import and export and other relative activities in metallic minerals and related products, non-metallic minerals and related products, hardware and related products, construction materials, oil and oil products, chemicals and related products." (Responsible Cobalt Initiative (RCI) & Responsible Minerals Initiative (RMI), 2021, p. 29) Working in collaboration with international firms, CCCMC created the Responsible Cobalt Initiative in 2016. It furthers the OECD Guidance's application and contributes to the development of Chinese stakeholders' capacity to fulfill the OECD Guidance and Chinese Guidelines (BGR, 2021, p. 4; Petavratzi et al., 2019). Given the major presence of Chinese firms in the copper- and cobalt-mining region of DRC, this standard, alongside the OECD Guidance, has significant relevance (Mancini et al., 2021, pp. 4-5). Park (2023) describes China's place in standard making:

> China's role in transparency norm development within global extractives governance has evolved from that of norm-taker to norm-maker at the global level […] The period 2013–15 represents "norm localisation," whereby Chinese actors translated a global transparency norm into domestic guidelines for Chinese companies involved in the extractive industry sectors and in the process creating a subsidiary norm consistent with "thin" transparency. The RCI (2016–present) period represents an effort to "universalise" the new Chinese version of transparency and to reshape understanding of transparency in global extractives governance. (Park, 2023, p. 5)

The Cobalt Refiner Supply Chain Due Diligence Standard

The Cobalt Refiner Supply Chain Due Diligence Standard (the Cobalt Standard) is a joint initiative that was created by the RMI and the Responsible Cobalt Initiative (RCI) to put into place expectations that refiners carry out due diligence in their supply chains of cobalt (Trafigura, 2022, p. 25). Published in August 2021 and effective as of January 1, 2022, Cobalt Refiner Supply Chain Due Diligence Standard Version 2.0 has the objective of showing how to carry out diligence for the supply chain of crude and refined cobalt in line with the Chinese Guidelines and/or the OECD Guidance. The Standard's pilot version was released in 2018 (Responsible Cobalt Initiative (RCI) & Responsible Minerals Initiative (RMI), 2021, p. 5), followed by Version 1, released in 2019 (idem, p. 34). The Cobalt Standard applies to crude refiners operating in the DRC and to fine refiners with activities in other countries (Deberdt, 2021a, p. 19), but not to trading or mineral recovery companies (idem, p. 8). The standard applies to material mined both industrially and artisanally (idem, p. 14) as well as to transport routes (idem, p. 36).

The implementation of the Cobalt Standard takes place as part of the Responsible Minerals Assurance Process framework "and is inspired by RMAP 3TG Standards and implementation for smelters and refiners." (Deberdt, 2021a, p. 19). This Standard in its latest iteration also makes it possible for firms to become compliant with the Responsible Sourcing requirements of the London Metal Exchange (LME). When version 2.0 was launched, it was announced that "an independent third-party OECD Alignment Assessment" of the Standard would be conducted, a necessary step for obtaining the LME's formal approval (Responsible Minerals Initiative (RMI) & (RCI), 2021).

The Cobalt Standard gives support to companies to engage in responsible sourcing from CAHRAs and, where applicable, from artisanal and small-scale mining. Firms' responsibilities in terms of procurement involve both due diligence and the management of risks, but according to the Standard "may further include engagement with stakeholders in the supply chain to drive positive impact for the local communities that are beyond the actions required under this Standard." (Responsible Cobalt Initiative (RCI) & Responsible Minerals Initiative (RMI), 2021, p. 5) Corporations receive encouragement to engage with actors in their supply chains. Before deciding to suspend or discontinue a relationship with a given supplier, companies are supposed to take into consideration the possible impacts on mining communities' livelihoods. For ASM sourcing, companies are particularly encouraged to work with upstream suppliers to mitigate risks and provide remedy when adverse impacts have occurred. The Standard adheres to the five-step structure in the Chinese Guidelines and the OECD Guidance. It also incorporates supplementary requirements, namely a sixth step called Community Participation. Going beyond the OECD Guidance, the Standard provides

recommendations for the management of “additional Environmental, Social, and Governance issues” (ibid). Firms can engage with other businesses or through an industry scheme in order to divide the costs “for third party assurance and / or on-the-ground assessments” (idem, p. 6). Assessments conducted against the Standard decide whether a given company’s due diligence practices and assessment of risk are in conformity with the OECD Guidance or Chinese Guidelines. Yet as this is not an assessment to certify materials, it cannot make the determination that the Company’s materials are devoid of serious impacts of a social, environmental and governance nature (idem, p. 9). The Cobalt Standard lays out the supply-chain risks covered by the Chinese Guidelines and the OECD Guidance, and also includes risks related to occupational health and safety (idem, p. 17).

The Standard explicitly includes the requirement of **community participation**, in order to encourage companies to engage and establish partnerships with stakeholders, including artisanal miners and local communities. In the Standard elements that are considered as community participation range from the provision of training opportunities, social impact assessments, inclusion of local community issues in corporate grievance mechanisms, creation of partnerships, to assigning the responsibility for community participation in corporate management roles.

The Cobalt Institute’s Cobalt Industry Responsible Assessment Framework

The Cobalt Institute created the Cobalt Industry Responsible Assessment Framework (CIRAF), “a reporting framework and management tool” for the cobalt industry and its customers, with help from the consulting firm RCS Global (Cobalt Institute, 2019, p. 1). The Cobalt Institute is a trade association composed of producers, traders, recyclers, and users of cobalt products (Cobalt Institute, n.d.-a). The organization, based in the United Kingdom (Cobalt Institute, n.d.-d), is largely dominated by the interests of a few major mining companies, including Glencore and Eurasian Resources Group (ERG).

CIRAF was first implemented in 2019 (Petavratzi et al., 2019, pp. 53-54). It “was the first tool to articulate a joint approach for defining, managing and reporting on the responsible production of cobalt” (Glencore, 2020a, p. 2). Glencore, “one of the world’s largest industrial producers of cobalt and a major operator in the DRC,” has noted that CIRAF constitutes a framework for communicating, in a transparent manner, how the company produces and sources cobalt responsibly, “under a shared industry approach.” (ibid) The members of the Cobalt Institute account for more than 70% of the cobalt that gets mined around the world (Cobalt Institute, n.d.-c). Companies that are members of the Cobalt Institute have individual codes of conduct for good practice on matters such as human rights, health, and the environment (Cobalt Institute, 2019, p. 2). While described by some as “enabl[ing] a more coherent and consistent approach to cobalt due diligence and

reporting by the cobalt industry" (McQuilken et al., 2022, p. 524), the framework's lack of transparency as well as limited adoption calls into question its efficacy.

The CIRAF follows a multi-level approach differentiating between levels of compliance and well as risk categories. Two core compliance levels are included in the framework. Level 1, Step 1 includes general compliance and the signature of a statement which addresses basic levels of legal compliance. This statement engages the company to undertake a site-level annual assessment for critical risks, receive a third-party assurance on its policy and due diligence management systems when it comes to human rights issues, and annually publicly publish a summary of the assessment (Glencore, 2020a, p. 7). Following this first step, Level 1, Step 2 focuses on Human Rights while Level 2 addresses additional risks. In the risk category environment, it defines impacts on air, water and soil; and biodiversity. In the category occupational health and safety (OHS), it defines OHS and working conditions. Under human rights it defines conflict and financial crimes; human rights abuses; worst forms of child labour. Finally there are community-related risks, such as artisanal and small-scale mining; livelihoods; and resettlement (Cobalt Institute, n.d.-b).

CIRAF builds on existing standards and does not intend to create a new standard system. Hence, 12 instruments were used to create the framework, from the UNGP to the IFC Performance Standards (Glencore, 2020a, p. 10). Interestingly, the Cobalt Institute elected not to include some of the most in-depth standards such as the Initiative for Responsible Mining Assurance (IRMA) – which provides "independent assessment against a comprehensive standard for all mined materials that provides 'one-stop coverage' of the full range of issues related to the impacts of industrial-scale mines" (Initiative for Responsible Mining Assurance (IRMA), n.d.-a) – calling into question the effectiveness of the current CIRAF model. In June 2022, moreover, the Cobalt Institute announced that it was granting a reporting hiatus to those of its members who had committed to CIRAF adoption. The Institute noted that given "the rapidly changing landscape of responsible sourcing in the cobalt industry and emerging mandatory due diligence requirements," it would be assessing CIRAF's future with Cobalt Institute members (Cobalt Institute, 2022)

LME Responsible Sourcing Requirements

After carrying out a "formal market-wide consultation," the LME declared its requirements for responsible sourcing in October 2019. All brands registered with the LME, now and in the future, must put into place the OECD Due Diligence Guidance (whether through tracks A, B, or C, or by confirming "secondary sourcing through track D"); "[m]aintain an ISO 14001 environmental management system certification or equivalent"; and "[m]aintain an ISO 45001 / OHSAS 18001 occupational health and safety management system certification or equivalent". The deadlines to report on the OECD Guidance started on June 30th, 2022, with

all elements of the requirements to be implanted by December 31st, 2023 (The London Metal Exchange (LME), n.d.).

Track A provides a pathway for all brands, including producers that come across red flags. Brands can make the choice to affiliate with "an internal or external standard" such as RMI's RMAP; the standard they choose is subject to independent verification regarding its alignment with the OECD Guidance (The London Metal Exchange (LME), 2021).

Individual company frameworks

Finally, individual large companies such as Glencore, Eurasian Resources Group (ERG), and Umicore all have their own specific frameworks. Umicore, "a global material technology and recycling group" that "owns two cobalt refineries in Belgium and Finland and has one minority joint venture in China" has developed a sustainable procurement framework for cobalt, some of which it purchases from mines in the DRC (Mancini et al., 2020, p. 42). The framework is applicable to all the cobalt the company buys and seeks to cut down on the risk that cobalt in the company's supply chain may be connected to human rights concerns or business practices of an unethical nature. Umicore's framework, which like many others uses the OECD Guidance as its foundation, is "audited by a third party." (Mancini et al., 2020, p. 42) Umicore's due diligence approach involves four steps: supply-chain traceability, supplier research, risk assessment, and risk mitigation (idem, p. 42-43).

In 2018 ERG, supported by Levin Sources, released another upstream due diligence initiative (Levin Sources, n.d.-a), aiming to communicate that the company produces cobalt responsible and that it seeks "to address risks associated with human rights infringements and unethical business practices, in particular child labour." (Eurasian Resources Group, 2018) The initiative was first called the Clean Cobalt Framework, but was renamed to the Clean Cobalt & Copper Framework when the scope expanded in 2021 to include copper (Eurasian Resources Group, 2022, p. 6). The framework includes seven commitments and is designed to be aligned with the OECD Guidance and the UNGPs (idem, p. 9). As of September 2022, the framework is implemented in all ERG's cobalt and copper operations in the DRC through its Metalkol RTR project, Frontier and Boss Mining (idem, p. 2).

Considering **participation,** the Clean Cobalt and Copper Framework aims to send the message that ERG is committed to stakeholder engagement, mentioning that the framework prioritizes collaboration with communities through participatory approaches (Eurasian Resources Group, 2022, p. 9). Metalkol RTR has established grievance and whistleblowing mechanisms, which can be accessed through both online and in person channels (Eurasian Resources Group, 2019, p. 6). As of March 2019, Metalkol RTR is further addressing stakeholder engagement through its Stakeholder Engagement Procedure and Plan, its Community Engagement Calendar, its Strategic Community Investment Plan and a Grievance Mechanism Procedure for communities . These processes have included

participatory rural appraisals, through which the company aims to identify the needs and priorities of the communities (idem, p. 18).

Responsible sourcing programmes

In this section we consider responsible sourcing programmes implemented in the two regions - eastern DRC and the provinces of Lualaba and Haut-Katanga. This section addresses the on-the-ground projects, programmes, and initiatives that can also be referred to as "direct engagement projects" (Manhart & Schleicher, 2013). Levin et al. (2015, p. viii) argued that "there are a lot of systems for doing due diligence on conflict minerals supply chains, but there is not a system for doing due diligence on the performance of the conflict minerals initiatives." Indeed, IPIS/ULULA (2019, p. 8) recently reported that

> efforts to analyse the impact of due diligence have largely focused on the degree of compliance of downstream companies with Dodd-Frank 1502. Few, if any, analyses have attempted to make sense of conflict minerals disclosure beyond Dodd-Frank 1502 requirements, therefore little is known about the impact of due diligence programmes on local communities in eastern Congo

Protecting vulnerable people is viewed as a crucial element when it comes to implementation. The question of the distribution of costs among actors in the chain is an important one. Traceability and due diligence have resulted in an additional financial burden for upstream actors, particularly artisanal miners. Therefore, systems and pilots for 3TG and cobalt must ensure that they "safeguard participants and vulnerable third parties against direct or indirect negative social or economic impacts" (Levin et al., 2015, p. viii). Where risks are present, they should be acknowledged and mitigated (idem, p. viii-xii). On a related note, it has been argued that while small-scale producers' participation in upstream due diligence schemes makes it possible for them to access global markets, most programmes offer little in the way of access to finance or of connections with financial stakeholders who could provide financing for supply-chain participants. Sofala Partners and BetterChain (2019) argued that there is a need for a cultural shift within banks and development finance institutions, away from total disengagement in response to the identification of any risks and towards a strategy based on "collaborative risk mitigation" (idem, p. 8-9).

For gold, sourcing standards have largely been developed and enforced for industrial, rather than artisanal, mining. The vast majority of ASM gold from the region does not go through meaningful due diligence verification, and much of it is smuggled out of the country. Gold's characteristics indeed present obstacles to most of the traceability methods applied for the 3Ts, namely the fact that gold can be much more discreetly transported. Consequently, gold from different mines can easily be mixed together along the supply chain. The characteristics of gold therefore make the verification of origin, and mineral traceability

from mine to export, much more challenging (Geenen, 2015). It has been argued that the gold sector is the most affected by armed-group involvement, and should therefore be a priority for actors concerned about better supervision of ASM (EurAc, 2017, p. 27). While several pilot projects have been implemented, gold traceability still remains to be achieved, though several sites have been verified as "green." These projects include the Just Gold pilot project, which has been described as the most advanced gold traceability scheme, and is one of the comparatively small pilot programmes for gold supply chains in particular areas of eastern DRC, as well as Capacity Building for Responsible Minerals, implemented by TetraTech (a provider of consultancy services based in the US) (IPIS/ULULA, 2019, p. 11). A new "blue" status for mines was created by ministerial decree in 2021; which "allows a registered mine site to exploit and export minerals while officially waiting for its qualification / validation status." (IPIS, 2021) Challenges encountered by Just Gold include "the inability to convince small traders to sell gold onto a legal comptoir, and the lack of [a] longer-term financing model." (Levin Sources, n.d.-b, pp. 62-63)

When it comes to cobalt sourcing, a limited number of responsible sourcing arrangements are actually active on the ground and as Mancini et al. (2021) noted, only two of the systems then active included ASM. Mancini et al. (2021, p. 12) posit that "if, as proposed by the EC, due diligence on cobalt supply chain will be mandatory for batteries sold in the EU markets in the near future, the demand for responsibly sourced cobalt will increase rapidly", which raises questions about the potential reach and effectiveness of these programmes. Mancini et al. argue that, given the limitations when it comes to these schemes' continuity and scalability, which are highly susceptible to the fluctuations of the market, these types of market-based approaches implemented by private players should be combined with community development initiatives and public funding to make it possible to scale up these initiatives and make them sustainable. Currently, they account for "a negligible amount of the cobalt supply from DRC." (idem, p. 13)

Due diligence and traceability programmes

Upstream initiatives such as the ones discussed in this section, the International Tin Supply Chain Initiative (ITSCI) and Better Mining (formerly known as the Better Sourcing Program, BSP), offer an efficient means for corporate verification of the chain of custody of minerals. They help companies comply with due diligence requirements by providing supply chain information, identifying risks and help companies responding to them, and monitoring compliance with standards (Postma & Geenen, 2020, p. 6).

Critiques of such upstream due diligence and traceability providers include the fact that they gain significant control over the market for "clean" minerals while not being systematically scrutinized themselves, and there is not enough transparency around their adoption and functioning. In the DRC the functioning of ITSCI and Better Mining is based on Memoranda of Understanding negotiated on an individual basis with the Congolese government, which

are not available to the public. International setters of standards like the Responsible Minerals Initiative have sought to compensate for this accountability gap by creating their own procedure that assesses and validates what RMI calls “upstream assurance providers” that are compatible with the RMAP (Levin Sources, 2021a, p. 13). RMI initially recognized ITSCI and Better Mining as Level 1 upstream mechanisms, but dropped ITSCI from its list in November 2022, only to come to a new “mutual understanding” in January 2023 (Responsible Minerals Initiative (RMI), 2023). In June 2023, ITSCI announced having achieved a second alignment assessment with the OECD Guidance, conducted by Kumi Consulting (ITSCI, 2023), paving the way for its recognition as a Level 1 RMI upstream scheme. ITSCI and Better Mining account for a significant volume of the 3T minerals that get exported by DRC and as such provide an important service for the members of RMI. Yet there is a lack of clarity on whether chain of custody systems that are of smaller size and more specific would be recognized under the RMI programme or even have sufficient resources to meet the requirements for a positive assessment (Levin Sources, 2021a, p. 13).

Other critiques include these programmes' record when it comes to following up on incidents reported. In 2016 ITSCI had 916 incidents on record, but only 324 had been resolved by the end of the year. BSP had overseen and resolved 19 out of 27 incidents by July 2017. The international NGO Enough viewed programme reporting of incidents as a positive development, but argued that “end-user companies—the ultimate customers for these programs—must be more diligent about following up on these reported incidents and insist that they be resolved.” (Callaway, 2017, p. 16)

ITSCI

ITSCI, which operates in the tin, tantalum, and tungsten sector, has been described as the most advanced due diligence programme in operational terms. It originates from a working group within the International Tin Association (ITA), a non-profit industry organization representing the biggest tin smelters particularly the Malaysian Smelter Corporation Berhad, ThaiSarco Smelting and Refining and Yunnan Tin Group (ITSCI, 2016). The 2009 working group was followed by a small pilot launched in eastern DRC in 2010. In 2011 the Tantalum-Niobium International Study Center (T.I.C.), representing the tantalum and niobium industries, also joined ITSCI management. The enactment of Dodd-Frank contributed to driving ITSCI’s rapid expansion, as it was the only due diligence programme present in the region. By the end of 2017, according to ITSCI, the initiative had scaled up to the point that its geographical coverage across Central African countries was over three times larger than the UK and made it possible for over 21,000 tonnes of mineral concentrate to be exported every year (ITSCI, n.d.-b).

The ITSCI programme is managed by a governance committee consisting of two representatives, one of the ITA and one of the T.I.C., who are in charge of the overall direction of the programme and finances. Postma and Geenen (2020) add that an advisory

panel is listed on the website, which is “open to NGO’s and others with expertise in the relevant implementing countries and with an appropriate knowledge of the mining sector and mineral trade” (ITSCI, 2020). During the authors’ research in 2020, the website listed three members of this advisory panel, but these has no formal oversight function (OECD & Kumi Consulting, 2018, p. 63; Postma & Geenen, 2020). The governance committee is assisted by secretariat based in London. All this raises concerns about the participation of all stakeholders in the programme.

In terms of finance, there are concerns too. Postma and Geenen (2020, p. 10) report that “upstream actors are sharing at least 80% of the costs of the ITSCI programme via levies on exports and annual and joining fees, while downstream members, who benefit most from the mineral traceability in response to consumer pressure, only cover less than 1% of these costs”. ITSCI is principally financed through levies exporters pay when they export tagged minerals from the Great Lakes. Consequently, it is clear that it is in ITSCI’s interest to tag high mineral volumes. ITSCI reporting revealed that upstream actors were the source of 97% of its 2019 funding. The more reach the system possesses and the more mineral production flows through it, the less ITSCI has to charge its members, therefore incentivizing maximizing the amount of tagged minerals (Global Witness, 2022, p. 43).

ITSCI’s stated objective is to put into place responsible supply chains of minerals, i.e. supply chains that do not play a part in armed conflicts, human rights abuses, or other risks including bribery. ITSCI uses the OECD Due Diligence Guidance as a reference, noting that its standards are in full alignment with the OECD recommendations. Like other initiatives, ITSCI emphasizes the use of market-based approaches to create change, as illustrated by the following quote on their website: “ITSCI has demonstrated the power of market incentive to create change in the most challenging areas of the world” (ITSCI, n.d.-b)

All actors with exporting capacity in upstream mineral supply chains are eligible to become full members of the ITSCI programme. Downstream companies can become “associated members”. The process for becoming a member involves an application, an independent audit, and the payment of a joining fee and an annual membership fee of both USD 1975 (for full members in CAHRAs) (ITSCI, n.d.-a). Like other upstream due diligence programmes, ITSCI emphasizes access to international markets but offers few benefits when it comes to access to finance for upstream producers (Sofala Partners & BetterChain, 2019, pp. 8-9). Indeed, the cost to implement traceability and monitoring is viewed as a major barrier when it comes to ITSCI implementation, and to a lesser extent the application of BSP. The cost of implementation, which is paid for by the mining company (which is the exporter), has proven controversial and is said to have led the *Societe Miniere de Bisunzu* (SMB), the biggest producer of tantalum in eastern DRC, to leave ITSCI in favour of BSP (Deberdt & Billon, 2021, pp. 8-9).

On the ground, in the mines where ITSCI is operational, a traceability system is put in place. It is a "paper-based 'bagging and tagging' manual system [that] tracks the journey of the minerals from the mine site registered under the tag to the smelter" (Postma & Geenen, 2020, p. 11). Information is collected in paper logbooks, entered in the computer in the regional office, and processed by the secretariat in London. High-risk sites are monitored by ITSCI field officers in partnership with the respective governments. Postma and Geenen (2020, p. 14) state that "during our field research [which took place in Rwanda] several respondents raised some concerns about the frequency and the quality of monitoring, as well as about the accessibility of information".

Similar concerns have been raised by different organizations. In 2017, after facing corporate and NGO pressure for years, "iTSCi finally began publishing the reports of the local multi stakeholder committees in eastern Congo" (Callaway, 2017, p. 16). This represented a key step towards guaranteeing transparency and was, according to the Enough Project (idem), a move that makes it possible for "companies to then follow up on any concerns noted in the multistakeholder reports." The 2018 study by OECD found that "a significant amount of information is publicly available on the ITSCI website, including on member companies, risks and annual reports, albeit not always in a particularly accessible format and not always in a timely manner" (OECD & Kumi Consulting, 2018). More recently, Global Witness (2022, p. 48) also highlighted secrecy as a concern, noting ITSCI's failure to "publish any production data at mine level either, even though such data is not usually considered a commercial secret in the mining sector."

Even more problematically, Global Witness' (2022) highly critical report concluded that ITSCI was involved in the laundering of "conflict minerals" from eastern DRC and potentially even contributed to conflict by seeking to discourage mining companies from competing traceability schemes. Global Witness expressed concern that large quantities of minerals tagged under ITSCI apparently originate from mines that have not been inspected (p. 16). Global Witness also describes how ITSCI has had knowledge of serious problems with the system for years and sought to keep those hidden, including by engaging in retaliatory measures (p. 20). Still according to Global Witness, ITSCI made an attempt to weaken a competing actor, which worsened tensions between a mining company and the members of a mining cooperative, and may have contributed to violent outbreaks in 2019 and 2020. The police response generated a violent cycle in the Rubaya area from 2019 to 2020 (ibid, p. 39). Therefore, according to Global Witness,

> "The alleged abuse of incident reporting to squeeze out RCS Global suggests that ITSCI is more concerned with maintaining its dominant status for traceability than with its stated goal of creating "responsible mineral supply chains that avoid contributing to conflict [and] human rights abuses"." (p. 32)

Finally, large-scale smuggling of Congolese minerals to Rwanda has persisted despite the presence of ITSCI in Rwanda and the DRC. Global Witness (2022, pp. 46-47)'s evidence suggests that “the ITSCI scheme has actually been acting as a driver of this illegal activity, particularly in the first years”.

Many of the issues with ITSCI can, according to Global Witness (2022, p. 44) be linked to the ITA’s “conflict of interest between on the one hand running a scheme aiming to stop tainted 3T minerals from being sold on international markets and on the other hand representing many of the major buyers”. As Global Witness argued, incident reporting - an important component of a due diligence scheme - can become an influential instrument that makes it possible to wield control “over access to or exclusion from” a given market (idem, p. 46). This is especially troubling, they add, if the due diligence system in question is run by an actor like ITSCI with poor governance arrangements “whose members have strong interests in the market.” (ibid). Actors therefore draw on ITSCI to obtain a seal of approval for, and launder minerals that have been smuggled and are often associated with conflict, “with what is widely perceived as a “conflict free certificate”, on which actors in the 3T and electronics markets rely.” (idem, p. 52) The minerals in question then enter international markets (idem, p. 60). Global Witness (2022, p. 58) even alleges that an international corporate actor, MSA, and specifically its CEO David Bensusan, helped the Rwandan government draft traceability legislation for Rwanda and even “created” ITSCI along with a high-placed Rwandan general who was previously the defence minister of Rwanda, James Kaberebe, to create a monopoly and benefit from a traceability scheme that operates fraudulently.

Better Mining

Resource Consulting Service (RCS) Global Group’s (now part of the larger SLR Consulting) Better Mining was previously known as the Better Sourcing Program in 3TG and Better Mining in cobalt, and applies to the upstream ASM segment (Deberdt & Le Billon, 2022). BSP started as a competitor of ITSCI despite not operating at the same scale (Levin Sources, 2021a, p. 4). However, as criticisms against ITSCI mounted, important actors in the 3T sector decided to join the RCS Global Group-enabled system instead. In 2019, for example, the largest coltan producer in Eastern Congo switched from ITSCI to the Better Sourcing Program (Mahamba & Lewis, 2019), causing many tensions in the sector.

Better Mining is a “mineral agnostic assurance and impact program” that provides continuous monitoring and support in an effort to improve conditions at and around ASM sites (RCS Global Group, n.d.-a). Better Mining provides supply-chain validation using 16 essential criteria, which are in conformity with the OECD Due Diligence Guidance. The aim of Better Mining is monitoring (Deberdt, 2021a, p. 8) and, according to the company, aims to 1) assist downstream companies with identifying, and carrying out due diligence at, ASM

sites that feature in their supply chains; 2) permit companies to support development within ASM sites and neighbouring communities at the regional level; and 3) provide assurance in order to facilitate market access for workers and exporters who are in compliance with requirements for responsible sourcing. As an RMAP-aligned scheme, RCS Global Group entered into a partnership with the RMI in 2021 to support the implementation of Better Mining at ASM mine sites, in particular in the 2C sector (RCS Global Group, 2021b). According to the Better Mining website, it has a range of well-resourced corporate supporters including Google, Sony, Volvo, LG Electronics, CMOC, and Huayou Cobalt (RCS Global Group, n.d.-a).

Better Mining relies on digital technologies to share information in real time. As argued by Calvao and Gronwald (2019, p. 7),

> the Better Sourcing Program [is] another example of combining blockchain integration and due diligence. First, they validate and monitor cobalt miners in the DRC for compliance with the OECD Due Diligence Guidance. Second, they use digital monitoring adaptable to blockchain technology to trace the minerals and shield them from supply chain contamination.

The system relies on monitoring agents continuously gathering data on risks, impact, and context at ASM sites. These agents monitor the implementation of corrective actions to mitigate these risks. Data is collected using a custom-built smartphone application. The following step involves the tagging of bags through barcodes and the collection of critical information such as weight, location, and timestamp data at the different processing steps. The shipments are then followed up until their point of export, until which it becomes the responsibility of the purchaser. Experts in due diligence verify and analyze the traceability and risk data gathered by monitoring agents and devise Corrective Action Plans (CAPs). These CAPs are issued each month and progress towards their achievement is shared with supporting companies (RCS Global Group, n.d.-a).

Certification programmes

As noted, certification is confirmation, through a third-party audit, regarding the products or systems of a given organisation (UKAS, n.d.). A certification audit involves an audit of a company, by a certified body, “to ensure compliance of all elements of a specific standard.” (Huckabone, 2020) Certification programmes, therefore, “can help certify that private actors comply with specific standards.” (Postma & Geenen, 2020, p. 6) Non-state actors, whether private or non-profit organizations, have established several of these programmes (ibid).

Certified Trading Chains

The first player to become involved in the certification of minerals from eastern DRC was the German government, in the form of the Certified Trading Chains (CTC) initiative that the Federal Institute for Geosciences and Natural Resources (*Bundesanstalt für*

Geowissenschaften und Rohstoffe or BGR) launched in 2008 (EurAc, 2017, p. 23). The CTC system's main objective is the certification of "ethical" mineral production and trade, starting with the 3TGs but with the possibility of expanding to other minerals. The scheme recognizes ASM's sector-specific challenges and is therefore particularly attentive to its feasibility and effects in the ASM context. The emphasis is on process "rather than just demanding and certifying certain performance targets." (BGR, n.d.) CTC applies to the upstream portion of the supply chain. It has set down five principles related to traceability and transparency; labour and working conditions; security; community development; and environmental protection. These 5 principles can be translated into standards "adaptable to reflect the national regulatory context" (idem). Smelters and downstream firms make support available to upstream actors for the implementation of the audit process. In exchange for this support, they gain from the increased security "and knowledge of their suppliers" (Levin Sources, n.d.-b, p. 62).

BGR's Analytical Fingerprint (AFP) is a scientific tool with which it is possible to verify the origin of shipments of 3T mineral ore, and was conceived of as an optional proof-of-origin element within the mineral certification framework. Operators of mines in the Great Lakes region who seek to be certified under the CTC system must allow for AFP sampling within their concessions or run the risk of receiving a yellow flag (bundesanstalt für Geowissenschaften und Rohstoffe (BGR), n.d.). The new version of the CTC Manual (Ministère des Mines, 2019) "defines 38 CTC standard indicators organized in the six principles (1) transparency and due diligence, (2) worker rights, (3) legality, (4) health and safety, (5) community development and (6) environment." This new manual was put into place after a series of consultations throughout 2018 and 2019. It established a multi stakeholder structure for the governance body, aligned the CTC standard with OECD and with the new Mining Code, expanded CTC beyond 3TG to all minerals, and introduced a single audit process.

With respect to **participation,** the CTC initiative requires companies seeking certification to include local community engagement aspects, to consult communities in which they operate and to contribute to their social, economic and institutional development, taking gender into account (BGR, n.d.). (Levin Sources, n.d.-b, p. 62) argues that the CTC approach is "feasible to implement," but points to the existence of limitations in the extent to which it is applicable for ASM. Larger operators, they note, tend to be able to become certified, while smaller ones often do not. They note there is a lack of obvious incentives to entice participants to join the scheme, as well as insufficient "capacity to apply and enforce the scheme" (ibid), resulting in a low number of CTC certified mines (Levin Sources, 2021a, pp. 12-13). In an earlier report Levin Sources Levin et al. (2015) already pointed out that it is a resource-intensive programme. It is not clear if it can achieve scalable goals affordably under the current model (e.g. multi-stakeholder audits done by northern auditors). A 2018 report by the Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE)

deplored the “lack of clarity as to how the certification decisions are made and/or communicated, lack of 3rd party auditing, lack of support between baseline and certification audits, no clear incentives for participants to join CTC, and its limited application to small scale operators.” (Levin Sources, n.d.-b, p. 47).

Initiative for the traceability of artisanal gold

L’Initiative de Traçabilité de l’Or d’exploitation Artisanale (ITOA) was established by the Congolese goverment’s *Centre d’Evaluation, d’Expertise et de Certification des substances minérales précieuses et semi précieuses* (CEEC) with the objective of developing an evolutionary model at the national level. The ITOA system uses secure bags that are sequentially numbered. The project created software that has previously been successfully deployed for industrially-mined gold. This initiative’s appeal includes the fact that it would rely on existing government resources and build capacity in the appropriate agencies, namely CEEC, SAEMAPE, and the mining administration. ITOA, it has been said, is presented as a “Congolese solution to a Congolese problem” (EurAc, 2017, p. 28). However, the scheme isn’t a replacement for, nor does it eliminate, the ICGLR’s certificate (Justice Pour Tous, 2021). Gobbers et al. (2020, p. 8) noted that different initiatives including ITOA “remain largely exploratory and localized, and their key focus lies with workable traceability rather than incident identification.” Despite the emphasis on a Congolese approach, little is publicly available about how the scheme has fared on the ground, including in terms of accountability, transparency, and participation.

Reporting, monitoring and mapping programmes

In this section we present the major monitoring, reporting and mapping projects that have been implemented in the two regions.

Table 3. Monitoring, reporting and mapping projects

Monitoring, reporting and mapping	Name	Date	Funders	Participants/Implementers	Minerals
	Kufatilia	2018 - Present	IcSP	IPIS, Ulula, CEGEMI, Congolese CSOs	Gold, extended to cobalt

	Matokeo	2020 - Present	Conservation X Labs' ASM Grand Challenge	IPIS, Ulula, Congolese CSOs	Gold, planned extension to cobalt and tin

IPIS

The International Peace Information Service is a Belgium-based independent research institute with extensive experience in issues of peace, human rights, and natural resources. In 2005 they launched a conflict mapping project with funding from the Belgian foreign affairs ministry. Since its launch, the mapping project has been financially supported by the World Bank through Promines, and then by the International Organization for Migration. This initiative resulted in the production of a range of interactive maps that had the aim of examining the linkages between conflicts and their underlying causes, including among others the presence of natural resources in conflict-affected areas. Maps developed included information on armed groups' presence and activities, sites' "green" certification status, and ITSCI coverage. Information that IPIS collected through this project was also shared with the *Cadastre Minier* to support the updating of the Mining Registry (*Registre minier*), as well as utilised by SAESSCAM (now SAEMAPE) for the development of their own database and maps (EurAc, 2017, p. 22).

Since 2009, IPIS has undertaken several projects to map artisanal and small-scale mine sites in the DRC, working together with Congolese government services as well as with local CSOs. To implement this mapping, IPIS surveyors have paid visits to mine sites and *points de vente* (trading centres) during field missions. These visits have involved gathering community members' phone numbers, making observations, and carrying out interviews with various key informants with the aim of filling out a detailed questionnaire, using the OpenDataKit tool. Most of the data collected through this mapping work is available to the public in the form of an interactive webmap and other publications produced by IPIS (IPIS/ULULA, 2019, p. 10).

Other initiatives to map ASM sites have been put into place with the objective of supporting the efforts of the Congolese *Cadastre Minier* (CAMI), the government body tasked with collecting mapping data on the different mining concessions. Since 2011, the CAMI website has provided a map of existing mining titles, granted and in progress, across the territory of the entire country, based on the information held in the mining registry, and updated regularly. The American Carter Center has also been involved in the development of maps on industrial mining. Two Belgian projects, *Cartographie GECO* and la *Cartographie des Conflits*, are of relevance here. Cartographie GECO (Geology for an economical sustainable development), an initiative of the Royal Museum for Central Africa (Africa Museum) in Tervuren, had the objective of providing a comprehensive database for use by authorities,

investors, and the public. The GECO website, http://www.gecoproject.org/, which at the time of writing of this working paper was no longer active, included an interactive mapping resource as well as information on known mineral deposits in the now-subdivided province of Katanga (EurAc, 2017, p. 22).

Kufatilia – Incident Monitoring and Reporting

Kufatilia is an incident reporting and monitoring project. It came about as part of the "Monitoring gold in DR Congo: ground-based incident reporting in eastern DR Congo" project (2018-2019) carried out by IPIS and Bukavu-based CEGEMI, and financed by the EPRM (IPIS, n.d.-d), covering gold in eastern DRC (South Kivu and Ituri). October to December 2018 involved platform testing, with incidents entered during CSO training. In January 2019, monitoring of incidents by the organisations trained took place, with a rise in reporting observed from March 2019 on (EPRM Secretariat, 2020).

"Kufatilia, which means "to track" in Swahili, was developed "to facilitate civil society organisations' (CSO) reporting of and follow-up on ASM-gold-related incidents". The platform is advertised as "transparent, independent and participatory." Civil society organisations make use of the platform to document their efforts to raise awareness of the issue with relevant parties, including local officials, the police, government mining authorities, cooperatives, the army, and/or civil society at the local level, with the aim of collaborating to seek a possible solution. A publicly-available webmap on Kufatilia's homepage makes it possible for CSOs, local officials, and ultimately firms engaged in due diligence to view real-time incident reports and keep track of their status (EPRM Secretariat, 2020). The Kufatilia reporting scheme is powered by Ulula, a private company that uses digital technologies to create more responsible supply chains. It was first tested as a pilot in northwest Tanzania's mining sector and was then scaled up in the Congolese provinces South Kivu, North Kivu and Ituri (Gobbers et al., 2020). More recently IPIS has found new funders and new partners and is expanding the system to the cobalt sector as well (IPIS, n.d.-b).

With Kufatilia, anyone can report an incident "through a simple, free and anonymous SMS platform that generates automatic questionnaires when triggered with the word "Kufatilia"." (IPIS, n.d.-b) The system then automatically generates an incident survey, which the informant can complete anonymously in Swahili, French, or English. In accordance with Annex II of the OECD Due Diligence Guidance (Jaillon, 2019), Kufatilia includes seven categories of incidents: "mining accidents, violence, child labour, corruption/fraud, road block, environmental issue, other". Incidents reported through the platform "are automatically uploaded on a web-based stakeholder platform" for monitoring and management by 18 local CSOs (Gobbers et al., 2020). From November 2018 to April 2020 (an 18-month period), the platform received nearly 850 incident reports. Mining accidents,

violence, and child labour were the most commonly reported incidents (Gobbers et al., 2020).

These CSOs are responsible for following up on incidents. The CSOs are expected to raise the issues that arise with the appropriate parties, “such as local authorities, police, mining state services, mining cooperatives, army or/and local civil society,” with the aim of working together to identify a possible solution. On the “ASM Incident Tracker'' website, a publicly available map provides a real-time visual representation of incidents that have been reported and monitored (Gobbers et al., 2020). Incidents are classified as “under monitoring, persistent, unresolved or resolved.” (Jaillon, 2019) According to IPIS the system allows Congolese CSOs to report on, and conduct monitoring of, incidents “in a transparent, independent and participatory way.” (idem)

The project especially stands out for its participatory methods in the implementation phase, as incident reporting, monitoring and resolving in this case are activities any individual can participate in and is therefore not exclusionary of certain stakeholders. Furthermore, the reports are filed anonymously and through an SMS platform, which does not require a lot of time and potentially takes away fear for possible consequences of reporting incidents. A capacity constraint that does remain is the necessity to have, and be able to use, a phone in order to report an incident. Meanwhile, a small amount of financial expenditure is required (namely phone units and/or Internet data) in order to report an incident.

Matokeo

In 2020, IPIS and Ulula received a $118,000 grant to develop the second stage of the data platform through “Matokeo” (IPIS, 2020b). IPIS describes Matokeo as “a digital bridge between local mining communities and downstream actors along the supply chain.” (Jaillon, 2020) Through sending Matokeo to the same phone number as Kufatilia, the two-way system enables participants to receive the daily gold price on the international market (Ulula & (IPIS), 2022).

Linkages with participation are clear: the Matokeo project is about using available technology “to hear the voices of artisanal miners in order to be able to support them.” (Jaillon, 2020) It is about giving “artisanal miners and their communities a voice through reliable data collection about the impact of mineral supply chains.” (idem) One of the key concepts at work in IPIS’ description of Matokeo is the importance of measuring phenomena in order to be able to improve them, noting that “by responding to regular and short mobile surveys, the miners can help downstream actors measure and understand the local impact of mineral extraction.” (Jaillon, 2020) Responses sent to Matokeo are confidential and anonymous. As of 2020 reporting responses could be completed for free, with participants automatically receiving a reimbursement for the mobile credit they had used in submitting their responses (Jaillon, 2020). A platform driven by data, Matokeo has

“the ability to reach last mile artisanal miners, enabling them to ping the latest international price of gold.” (Ulula & (IPIS), 2022) .

Matokeo was planned to develop the collaboration between IPIS, Ulula, and the Congolese civil society organizations involved in implementing Kufatilia. Matokeo’s main goal “is to build a robust citizen-centered database of respondents for human security, labour and environmental impact monitoring in the mineral supply chains in Eastern DRC.” (Jaillon, 2020) IPIS and Ulula aspire to lower the costs of collecting data as well as to provide continuous monitoring of major human rights impacts including forced and child labour, gender-based violence, and the use of mercury. Despite the fact that Matokeo is not a traceability or certification system, its creators “hope to integrate it into existing mechanisms to create better data loops and support the voices of miners throughout existing mineral supply chains and traceability mechanisms.”(Jaillon, 2020)

Other responsible sourcing/due diligence initiatives and community interventions, by commodity

In this section we consider other responsible sourcing programmes implemented in the two regions. Mancini et al. (2021, p. 13) argued that market-based programmes implemented by private actors are limited in their potential to be scaled up and to become long-lasting, given their vulnerability to market cycles. Therefore, they make the case that these approaches “should be combined with community development programs and public funding in order to ensure continuity and the upscaling of these experiences, which at the time of writing concern a negligible amount of the cobalt supply from DRC.” In what follows, we include both supply-chain and community-development programmes. Tables are used to summarize information on a range of projects, while key initiatives are given more space in the text.

Multiple minerals

The Public-Private Alliance for Responsible Minerals Trade (PPA)

In 2011 the US Agency for International Development (USAID) co-founded the Public-Private Alliance for Responsible Minerals Trade, along with various civil society and industry organisations. This multi-sector and multi-stakeholder initiative was launched with the aim to balance out some of the negative effects following the Dodd-Frank Act, and to encourage the supply of “legitimate, conflict-free minerals from the DR Congo and the Great Lakes Region” (Manhart & Schleicher, 2013, p. 6). Along with USAID, industry members of the alliance provide financial support to on-the-ground projects, including the projects Just Gold and IPIS’ Artisanal Gold Monitoring Pilot in 2016. PPA participants include Apple, Pact, Dell, Google, Solidaridad, RMI, Global Witness and several others (RESOLVE, n.d.-c), while the initiative is being administered by the NGO Resolve (OECD, 2016b, p. 1).

Table 4. Selected multi-mineral responsible sourcing/due diligence initiatives

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
Mitigating Child Rights Deprivations in ASM Communities Project	Better Mining and UNICEF	Technical collaboration announced in 2021. Project completion was scheduled by June 2022, with international adoption to begin thereafter	The cooperation fund We Stop Child Labor of BMZ (the German Government)	Mineral agnostic. Better Mining planned to implement its toolkit at one copper/cobalt ASM site and one 3TG ASM in the 3rd quarter of 2022. Toolkit extension to all sites monitored by Better Mining will take place only if funding secured	Collaborative development of a toolkit to help mine operators and supply-chain actors identify violations of children's rights and put in place "best practice social protection measures in the ASM context."	UNICEF (2021)
Ravara	Ravara and Levin Sources	Still in pilot stage as of December 2021	Funded by a licensing model	Worldwide; no specific mineral focus	An online due diligence platform "designed to be accessible to small companies, including ASM organisations, enabling inclusion and interconnectivity which are critical elements for implementing due diligence in the industry. Each vendor registers, goes through a KYC and validation process and can then use the platform to manage their due diligence system, take assessments against industry standards, and share documentation with suppliers and clients. Assessments are reviewed by a specialist third-party (Levin Sources), who provides recommendations and a roadmap for improvement. Companies update their profile on an on-going basis, to show	Levin Sources (2021b, p. 62)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					continuous improvement."	
Responsible Sourcing Network	The Responsible Minerals Initiative (via the Responsible Business Alliance Foundation) funded a baseline study of the ASM cobalt sector that was carried out a Department of Anthropology, University of British Columbia (UBC)-based researcher	2021	The RMI (via the Responsible Business Alliance Foundation)	Minerals from CAHRAs (3TGs and cobalt).	For the 3TGs, RSN works as part of a wide "network of NGOs, companies, investors, and industry associations seeking to end revenue generation from conflict minerals that help fuel the ongoing war," through "minerals value chains that are transparent, traceable and accountable." RSN has also carried out research, including on companies' disclosures to the Securities and Exchange Commission in the US under Dodd-Frank. RSN has also been involved with different "multi-stakeholder and industry-wide initiatives establishing a verification system for smelters, which is managed by the Responsible Minerals Initiative. RSN was also the lead coordinator in submitting multi-stakeholder comments to the SEC regarding Section 1502's rule making process." For cobalt: support for "increased collaboration between the different actors and initiatives operating in the sector. We embrace a dual approach of advocating for more transparency	Responsible Sourcing Network (n.d.)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					and accountability in the sector with standardized annual disclosures on a voluntary or mandatory basis, while also taking a lead on needed research."	
The Children out of Mining project (Watato Inje Ya Mungoti)	Pact	2003- For cobalt, 2015; three-year "expanded partnership" announced in 2017	Microsoft	3TGs and copper/cobalt	Pilot project that carried out actions that were heavily embedded in local communities and institutions in order to tackle the social and economic root causes of child labour in the mining sector	Pact and Microsoft (2017) (Pact, n.d.-a)
National Women in Mining network (RENAFEM)	RENAFEM	2015	The Congolese government organised conferences in Lubumbashi and Bukavu through the World Bank's $50-million PROMINES project	Multiple commodities, national	A network at the national level that aims to coordinate the interests of Congolese women in the mining sector and help them engage in advocacy for their rights.	World Bank (2017)
The Public-Private Alliance for Responsible Minerals Trade	RESOLVE has been the secretariat since 2011 (RESOLVE, n.d.-c). "Participants from corporate, government, and civil society sectors"	2011-	USAID, member funding	3TG and cobalt	"a multi-sector initiative between leaders in civil society, industry, and government that supports projects in the Democratic Republic of the Congo (DRC) and the surrounding Great Lakes Region of Central Africa (GLR) that improve the due diligence and governance systems needed for ethical supply chains. Funded projects	RESOLVE (n.d.-b) RESOLVE (n.d.-c)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
	(RESOLVE, n.d.-b)				bring in-region benefits and complement government initiatives, with a focus on developing tools and building civil society capacity to support responsible minerals sourcing and trading."	

Tin, tantalum, tungsten, and gold

Table 5. Selected responsible sourcing/due diligence initiatives for the 3TGs

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
Madini kwa Amani na Mandeleo (Minerals for Peace and Development)	IPIS, International Alert, EurAC, OGP and Justice Plus	2019-	Ministry of Foreign Affairs of the Netherlands	Great Lakes region	Contribute to stability in the region "by advancing stability and security in the vicinity of mine sites in eastern DRC, and by playing a role in the creation of "cleaner" mineral supply chains by cutting down on" smuggling in the region	Brier et al. (2021) IPIS (n.d.-c)
Solutions for Hope	Companies including AVX, F&X, FairPhone, Flextronics, Foxconn, HP, Intel, Motorola Mobility, Motorola Solutions, Nokia and Research in Motion.	Launched in July 2011 by by Motorola Solutions and AVX Corporation		The northern part of the former Katanga province	A responsible sourcing project led by industry, Solutions for Hope "developed a closed-pipeline supply chain for coltan sourced from three mining sites in northern Katanga (Mai Baridi, Kisengo and Luba) […] While the project uses iTSCi mineral tagging to secure the chain of custody […], the company Mining Mineral Resources (MMR) is acting as joint between artisanal mining cooperations and the smelter located in China. Although MMR claims to pay world market prices for the	Manhart and Schleicher (2013)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					mined ores, miners complained about low and non-transparent pricing from the side of the co-operative buyer CDMC16, which led to tension and unrest in the Kisengo location between 2010 and 2012"	
Partnership against child exploitation (PACE)	A World Vision-led consortium that include War Child (WC), Columbia University (CU), Fifty Eight, Thomson Reuters Foundation, and UN Global Compact Network UK (GCN).		UKAID	Diamonds and gold in the DRC, the Central African Republic, and Ethiopia	"Supporting children's agency to resist exploitation. Helping children and their families access suitable alternatives to the worst forms of child labour. Supporting policy makers, law enforcement and the justice sector to address child labour. Working with the private sector to map supply chains and strengthen due diligence."	Just Results (2020) International Labor Organization (ILO) (2021)
Sustainable Mine Site Validation (SMSV)	Implemented by Pact	December 2018-2022	USAID, about 3,7 million USD	3TG in North and South Kivu	The validation of mines as not being under the control of armed groups, and as containing no child labour.	United States Government Accountability Office (GAO) (2020, p. 26) USAID (2020, p. 26)
Fair Congo initiatives	Chambers Federation, USAID	Launched in 2017	USAID	ASM gold from the DRC	"1. Provide community with higher incomes through direct market access 2. Create jobs by expanding quantity and quality of exportable products through market demand 3. Creating an inclusive job market, providing opportunities to disadvantaged groups, primarily women 4. Provide government with unrealized taxes 5. Provide all levels of the supply chain with legal	Chambers Federation (n.d.)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					compliance as well as public relations 'positives' 6. Improve the overall stability of the region's economy"	
USAID's Responsible Minerals Trade (RMT) Program	USAID "in coordination with other U.S. government agencies, the Congolese government, international donors, the private sector, and civil society."	In line with USAID's 2015-2019 Country Development Cooperation Strategy	USAID	Eastern DRC	"establishes conflict-free supply chains, promotes civilian control of the minerals sector, ensures that vulnerable populations are protected, and supports regional auditing and monitoring of conflict-free minerals, in coordination with other U.S. government agencies, the Congolese government, international donors, the private sector, and civil society. In accordance with USAID's 2015-2019 Country Development Cooperation Strategy, RMT programs coordinate with other technical programs to create the foundation for durable peace in eastern Congo and to strengthen Congolese institutions to assume responsibility for their future."	USAID (n.d.)
Capacity Building for Responsible Minerals Trade (CBRMT)	Gold traceability conducted through both ITOA and the Better Sourcing Program [now Better Mining]	July 2014. The final project report was to be submitted in January 2019.	The Strengthening Tenure and Resource Rights (STARR) programme of USAID's Land Tenure and Property Rights Division.	The 3Ts and gold in North and South Kivu, and Maniema	The project's goal was to increase the DRC's capacity, as well as regional institutions' capacity, to regulate, in a transparent manner, "and control a critical mass of the trade in strategic minerals—tin, tantalum, and tungsten (the 3Ts) and gold—in eastern DRC to demonstrate the potential to transform the region's mineral wealth into economic growth and development." Activities included support to the ICGLR and capacity building/training.	Tetra Tech (2018, p. III)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
Conflict-Free Tin Initiative	Companies, government bodies, NGOs. Downstream: Alpha, Blackberry, Fairphone, HP, Motorola Solution, Nokia, Royal Philips Electronics. More upstream: AIM Metals & Aloys, Malaysia Smelting Corporation Berhad (MSC), Traxys and Tata Steel. Also Pact and the International Tin Research Institute.	2012-2014	The Netherlands Ministry of Foreign Affairs	Cassiterite (tin ore) from a South Kivu (Kalimbi) mine site	"focused on realistic and sustainable solutions to the issues of "conflict minerals" from the Democratic Republic of Congo. The CFTI aimed to show that companies can source conflict free minerals from the DRC in accordance with legislation (such as the US Dodd Frank Act, Section 1502) and international guidelines (OECD Due Diligence Guidance for Responsible Supply Chain of Minerals from Conflict-Affected and High-Risk Areas) through the use of joint industry programmes such as iTSCi (ITRI Tin Supply Chain Initiative) and CFSP (Conflict Free Smelter Program)."	RESOLVE (n.d.-a) Manhart and Schleicher (2013)

Gold only

The following table provides a summary of the key characteristics of responsible sourcing and due diligence initiatives, projects, and programmes that target only the mineral gold.

Table 6. Selected responsible sourcing/due diligence initiatives for gold only

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
Peace Gold project	Centre Résolution Conflits	Feb. 2021 - Jan. 2023 (2 years)	EPRM	Ituri province	-Production of ethical and environmentally friendly gold by people affected by conflict	The European Partnership for Responsible Minerals (EPRM) (n.d.-e)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
	(CRC), Peace Direct				-Bringing two ASM cooperatives in line with the CRAFT Code -Helping develop cooperative-created social funds to contribute to community needs -Training and encouraging "women from the mining community to raise awareness of issues of trauma healing, education, gender-based violence, child rights, and environmental protection."	
Responsible Gold in Beni (part of a wider stabilization programme called "Ensemble pour Beni," implemented by an IOM-led consortium)	IPIS. Partner(s): ASADHO, ASSODIP, CEGEMI	2019-2020	IOM	ASM gold in Beni-Mbau	-Laying the groundwork for supporting the creation of a responsible ASM sector -Conducting a baseline evaluation of the gold sector for gaining in-depth understanding of the area's mines and trade networks and for site selection for official validation -Supporting Beni authorities to create a local multi-stakeholder committee for supply-chain monitoring -Training of cooperatives by Bukavu-based CEGEMI; training of CSOs to then participate in promoting Kufatilia to ASM actors	IPIS (n.d.-e)
USAID's Commercially Viable Conflict-	Global Communities	December 2018,	USAID, $11.9 million	Eastern DRC	Economic development. Goal is to set up a conflict-free supply chain	USAID et al. (2021)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
Free Gold (CVCFG) Project (Zahabu Safi)	, working with Levin Sources, Better Chain and RCS Global Upstream Ltd.	five years			of artisanally-mined gold from eastern DRC. Three main objectives: "1. increase demand for and co-investment in responsibly-sourced ASM gold from eastern DRC; 2. increase exports responsibly-sourced ASM gold from eastern DRC; and 3. improve the commercial-viability of ASM gold cooperatives."	
Women of Peace project	IMPACT	Launch date October 2018, duration 15 months	The Swiss Department of Foreign Affairs and Global Affairs Canada	Ituri Province's Mambasa Territory	To provide support for gender equality and women's security in communities that mine gold artisanally in the DRC. The project provided support to female ASM miners to play a peacebuilding role in their communities. With REAFECOM, IMPACT launched Peace Hubs within ASM communities and at mine sites. Members of these hubs were to receive training on prevention and resolution of conflicts. The Peace Hubs also aimed to organize five dialogues on women, peace, and security.	IMPACT (2019b)
The Network for the Empowerment of Women in Mining Communities (REAFECOM)	REAFECOM, IMPACT	May 2018	IMPACT	Ituri Province	Ituri Province's first association of female artisanal gold miners, created "to represent their interests as women artisanal miners, with a goal of promoting women's rights in their communities." IMPACT has supported REAFECOM's creation and its ongoing activities to empower women in	IMPACT (2019a)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					ASM communities and cut down on the obstacles that prevent them from fully participating in ASM.	
Artisanal Gold Monitoring Pilot in Mambasa	IPIS	2016-2017	The Public Private Alliance for Responsible Minerals Trade	Mambasa, Ituri, DRC	To increase capacity at the local level for the monitoring of supply chains of gold, and of due diligence. The pilot demonstrated how to carry out systematic monitoring of "production data and trading patterns" at a large number of individual mine sites whose production flows into Mambasa's hub for trading ASM gold.	IPIS (n.d.-a) Brier and Merket (2017)
Just Gold	IMPACT	IMPACT first started creating this system in 2012. A 2014 pilot lasted a year and transitioned into Just Gold. The project was named Just Gold in 2017.	Global Affairs Canada. The 2014 pilot was supported by the PPA. USAID also previously provided additional funding through the CBRMT project, as did IOM. Apple and Humanity United have also provided funding.	ASM gold in Orientale Province (2012-2014) and Ituri Province (2015-2020)	Incentive-based traceability and due diligence system for ASM gold in DRC that "brings legal, traceable, and conflict-free artisanal gold from communities where security and human rights are at risk to international markets. IMPACT works with miners, traders, and exporters to create incentives for legal sales and provides capacity building to implement the traceability and due diligence required by the Just Gold project, in alignment with regional and international standards. We support artisanal miners to enter the formal economy, while promoting gender equality and environmental stewardship."	IMPACT (n.d.-b) Katho et al. (2021)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
Digging for Equality	IMPACT, working with Réseau d'Innovation Organisationnelle (RIO) in the DRC, and Zimbabwe Environmental Law Association (ZELA) in Zimbabwe, for implementation	Three-year project that started in 2020	Funding from the Government of Canada, through Global Affairs Canada	ASM in the DRC and Zimbabwe	"to improve security, gender equality, and women's empowerment in the artisanal mining sectors across three countries—Democratic Republic of Congo (DRC), Uganda, and Zimbabwe. The project will support women working in the artisanal and small-scale (ASM) sector to reduce the barriers that they face and support their efforts towards gender equality."	IMPACT (n.d.-a)
The Artisanal Mining Women's Empowerment Credit & Savings project (AFECCOR)	IMPACT	March 2017 to February 2019	EPRM	Gold in Mambasa, Ituri Province	To address the issue of female miners lacking access to credit and savings by backing the formation of village savings and loans Associations (VSLAs) for both women and men in communities mining ASM gold, to enable them to access credit and savings, with the objective of enhancing economic security and entrepreneurship. AFECCOR was directed at women miners who were part of IMPACT's already-existing Just Gold project, in addition to women in	The European Partnership for Responsible Minerals (2020)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					the community operating shops or restaurants for miner customers. In addition to providing support to miners to take up responsible practices, it sought to contribute to formalising the ASM sector in the area by encouraging artisanal miners to sell through gold in a legal manner through Just Gold-established sales points.	
Capacity Building for Responsible Minerals Trade (CBRMT) *Bwenge Buchiza Project*	La Coopérative Minière et Agricole de Ngweshe (COOMIANGWE), CBRMT, DRC government, Better Sourcing Program, GeoTraceability, Fair Congo, RAGS Forum, Asahi Refinery, Signet Jewelers, Richlin	2017	USAID	Pilot for responsible gold at a site 64 km southwest of Bukavu	The upstream Bwenge Buchiza project, part of the CBRMT project, sought "to implement a responsible ASM gold supply from the South Kivu in the DRC and strengthen the capacity of the DRC to regulate gold trade."	Levin Sources (n.d.-b, p. 63)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
	e Group					
CADD: Consolidated Autonomous Due Diligence	Better Chain and Gemcorp	May 2019 - April 2021	EPRM	Gold in DRC and Burkina Faso	"the development and pilot deployment of an open-source, public framework for upstream supply chain stakeholders to operationalize requirements from the OECD Due Diligence Guidance. Such a framework is an essential implementation mechanism for companies operating in, and procuring from countries covered by European regulation 2017/821 where no upstream due diligence program is established. It provides a solution to systemic constraints on upstream due diligence scalability, sustainability, accountability and reliability − the most significant challenge to responsible mineral procurement globally."	The European Partnership for Responsible Minerals (EPRM) (n.d.-b)

Cobalt

As noted, responsible-sourcing initiatives have proliferated in the Congolese ASM cobalt sector in the years since the publication of *This is What We Die For.* While these initiatives are diverse in terms of what they focus on, common themes can also be observed. One notable focus of several initiatives, for example, is encouraging youth to stop working in mines; fostering alternative livelihoods; and increasing the enforcement of bans on child labour (Pact, 2022). Certain responsible-sourcing initiatives such as the Mutoshi Pilot Project in Lualaba and Better Mining have received a relatively significant amount of academic attention and criticism. Yet as Deberdt (2021a, p. 10) points out with respect to the criticisms for which these sites have been singled out, “It remains important to note that while the companies […] face these criticisms, similar concerns exist in other sites not subjected to the heightened attention that responsible sourcing projects receive.” A similar

point is raised by Nkumba-Umpula et al. (2021), who highlight that 'islands of responsibility' are created when responsible sourcing programmes focus on a small number of mining sites, which are not necessarily representative of the whole environment.

The Mutoshi Pilot Project was implemented from 2018 to December 2020 at the Mutoshi site in the area surrounding Kolwezi. The project was created on land that Chemical of Africa (Chemaf) leased from the Congolese state-owned enterprise Gécamines, with Trafigura's financial support (Deberdt, 2021a, p. 9). In 2017, while investigating the possibility of a commercial partnership with Chemaf, a "mineral exploration, mining and processing company" in the DRC, Trafigura began a review, carried out by Kumi Consulting, a third-party assessor, of Chemaf's activities vis-à-vis Trafigura's Responsible Sourcing standards. In 2018, Trafigura Group and Chemaf (and Chemaf's parent firm Shalina Resources) agreed on a three-year marketing arrangement for the purchase of cobalt hydroxide. As part of this arrangement, Trafigura agreed to provide Chemaf with continuing support to build the mining firm's capacity to address environmental and social impacts. As Chemaf was planning the development of its Mutoshi concession, at first working with an ASM contractor, Trafigura funded Pact's involvement starting in January 2018 "to support Chemaf in the ongoing maintenance of a Responsible Mineral Sourcing programme in line with Trafigura's standards." (Trafigura, n.d.) With a focus on ASM formalization, Mutoshi was a pilot project implementing responsible sourcing measures (Deberdt, 2021a, p. 8), emphasizing supporting improvements to the environmental and social impacts of ASM (idem, p. 9).

The Mutoshi project was benchmarked against Trafigura's Responsible Sourcing Artisanal and Small-Scale Mining Expectations and the OECD Due Diligence Guidance. The project was very much a commercial undertaking, which also had a capacity building component. Its objectives were "to reduce reputational risk for the buyer, enhance cooperation between a group of actors, and prove the potential for collaboration between ASM and LSM" (Deberdt, 2021a, p. 9). Through PACT, the project provided a range of technical support services and onsite training, including "on occupational health and safety, roles and responsibilities, specialized cooperative training, security and human rights, ASM labor transitioning and resilience, as well as data collection and monitoring of the project". The project also included the establishment of a health clinic and the implementation of price controls. In March 2020, the project was suspended due to the COVID-19 pandemic. In December 2020, it came to an end altogether due to several factors combined, including the effects of the COVID-19 pandemic, tensions between project partners, and changing priorities after EGC was established (ibid).

In 2019 a Trafigura Group-commissioned report examined the local economic impact of the Mutoshi project. Despite several challenges, the report – unsurprisingly – points to an overall positive impact of the pilot and the potential for upscaling to other areas (Johansson de Silva et al., 2019). Recently, Baumann-Pauly (2023) wrote a new paper on the impact of

the Mutoshi project, based on a research trip in December 2022 together with Microsoft and Pact and facilitated by Trafigura. Although the paper overall confirms Trafigura's assessments in 2019, highlighting the positive legacy of the formalization efforts in Mutoshi, especially with regard to the empowerment of women, it also demonstrates how the suspension of the project in 2020 severely harmed miners and their families. Soon after the suspension safety precautions broke down, leading to several fatal accidents, the clinic was abandoned, personal protective equipment wore out, production and hence incomes declined, miners' negotiation possibilities worsened and children have gone back to mining. Furthermore, women have been affected disproportionately by these effects following the operations' suspension (Baumann-Pauly, 2023). These assessments suggest that while certain positive effects may be seen when formalization efforts are successful – at least for certain groups and over a given period – formalization projects are vulnerable to a range of profit-driven and other factors, and negative consequences are likely to arise when projects are suddenly halted.

Table 7. Summary of Key Multi Stakeholder initiatives for cobalt

Name	Date	Founders	Funding	Implementers	Members	Minerals covered
Cobalt Action Partnership	2020-2021		GBA, RMI	FCA, IIED, UNICEF, RMI	GBA, RMI, RCI, FCA	Cobalt & Copper
Fair Cobalt Alliance	2020-	TIF, Huayou, Fairphone, Signify	Huayou, Fairphone, Signify, Dutch Ministry of Foreign Affairs (2020)	Maison Kwetu, Alternatives for Actions (A.F.A.), la Coopérative Minière pour le Développement Social (CMDS)	23 Including Tesla, Glencore, Cobalt Institute	Cobalt

The Fair Cobalt Alliance

The Fair Cobalt Alliance (FCA) is a multi-stakeholder platform launched in 2020 by The Impact Facility (TIF) (with strong ties to consulting company TDi Sustainability) with

corporate and NGO partners. The organization is headed by an executive director and a seven-member steering committee which includes companies Fairphone, Tesla, Signify, Glencore, and LG Energy Solutions, as well as non-profit Save the Children and the Centre for Child Rights and Business (Fair Cobalt Alliance, n.d.-a).

The FCA's goal is to increase the supply of artisanal cobalt that is accepted by the industry , following best practices and international standards. To do so, the organization aims at improving artisanal mine sites, building a supply chain-wide coalition, and supporting community development. To achieve this goal, a five-outcome vision was developed, which includes 1) OHS through improved health and safety, 2) decent working conditions, 3) FCA as a growth-based and economically sustainable initiative, 4) decreased child labor levels, and 5) increased household incomes (Fair Cobalt Alliance, n.d.-c).

The (2022) reported in its annual report for 2022 that the alliance now includes 24 members from the upstream, midstream, and downstream sectors, as well as industry and trade bodies (RCI and Cobalt Institute), and non-profits (Fair Cobalt Alliance, n.d.-d). Additionally, the organization relies on local partners, including the Mining Cooperative for Social Development (CMDS) at the Kamilombe site, the non-profit Alternatives for Actions (A.F.A.), and Maison Kwetu, a not-for-profit organization focusing on orphans' needs (Fair Cobalt Alliance, n.d.-b).

Prior to the design of the FCA, the Impact Facility carried out an assessment of the issues and possible solutions around ASM cobalt. This assessment was based on field based data gathered through engaging with stakeholders, including rights holders on the mining sites, as well as wider affected community members (The Impact Facility, 2020). The FCA can be seen as an example of an initiative that aims to address rights holders' participation prior and throughout the design phase. For example, one of the projects launched by FCA is a PPE (providing personal protective equipment) project, targeting washers at Kamilombe. The design of the project, including what equipment was preferred by the washers and thus chosen for the project, was based on consultations prior to the project. Monitoring is done by the PPE Steering Committee, consisting of one FCA member, one CMDS member and one from the waterwomen committee. However, the report does not make it clear whether the initial idea for this project came from the women themselves (Fair Cobalt Alliance, 2022, pp. 22-23). In their 2022 Annual Report the FCA states that they ensure local ownership of processes such as the PPE project. Publishing annual impact and finance reports is one of the strategies through which the FCA aims to transparently communicate and ensure accountability to all stakeholders (Fair Cobalt Alliance, 2022, p. 8).

Table 8. Additional selected cobalt due diligence and responsible-sourcing initiatives

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
Mapping Payments	IMPACT	2023-	The European Union; Microsoft provides funding for complimentary activities	Artisanal cobalt	To decrease illicit trade and corruption in the DRC "by bringing transparency to the taxes and fees required along the artisanal cobalt supply chain. The project brings together provincial and national stakeholders to agree on the legally required taxes, fees, and administrative steps in the supply chain, as well as creating proposals on how to increase transparency and legal trade."	IMPACT (n.d.-c)
MAX-D – Maximizing Due Diligence in Minerals Supply Chains	Electronics Watch for "high-level expertise, coordination, and management for the project"; SARWATCH for "monitoring activities, trainings, and local industry engagement in the DRC" and CISEP for Bolivia.	October 2022 – October 2025	European Partnership for Responsible Minerals (EPRM)	Cobalt and tin in the DRC and Bolivia	Aims to grow the European public procurement market for responsibly-mined minerals by granting tenders to supply-chain actors with a certain degree of due diligence on human rights and the environment. Also aims to increase "local worker-driven monitoring capacity" in mining areas in the DRC and Bolivia, to strengthen workers' voices and produce monitoring reports that can be used by public buyers when engaging with suppliers. Brings together a bottom-up worker-driven approach with a top-down public procurement strategy to create a due diligence mechanism that, once the project ends, will be funded by public buyers linked with Electronics Watch.	The European Partnership for Responsible Minerals (EPRM) (n.d.-d)
African Development Bank Group – Democratic Republic of Congo - Support Project for Alternative Welfare of Children and Young	Implemented by the Congolese government, Ministère des finances budget	Approved on 17 Apr 2019; signed on 13 Jun 2019. Completion planned for 31 Dec 2024	African Development Bank (African Development Fund and Transition Support Facility" (60 million USD total)	Cobalt in Lualaba and Haut-Katanga, DRC	"to ensure the social reintegration of about 14,850 children (girls and boys) working in cobalt mines." "The project supports the implementation of the "National Strategy for the Exit of Children from the Copper and Cobalt Ore Production Chain in Haut-Katanga and Lualaba Provinces", of which Thrust 1 focuses on "reducing the economic vulnerability of	African Development Bank Group (2023)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
People Involved in the Cobalt Supply Chain (PABEA-COBALT)					households by promoting agricultural cooperatives and entrepreneurship"." To "ensure the socio-economic reconversion of the children's 6,250 parents (all young) to the agricultural sector, which has the greatest potential for economic diversification. It will create 11,250 direct jobs and thousands of indirect job, and will restructure 1,250 youth agricultural cooperatives." Three elements: "(i) support for the promotion of alternative economic opportunities and improvement of the living conditions of the populations in the project area; (ii) institutional support for the promotion of the responsible supply chain for cobalt ores; and (iii) project management (including implementation of the ESMP)."	
Combatting Child Labor in the Democratic Republic of the Congo's Cobalt Industry (COTECCO)	Grantee: International Labor Organization (ILO) and PACT	October 2018 - May 2024	Office of Child Labor, Forced Labor, and Human Trafficking (OCFT), Bureau of International Labor Affairs, U.S. Department of Labor Financial Year 2018 : USD 2,500,000 Financial Year 2020 : USD 1,000,000 Financial Year 2022 : USD 2,000,000	Cobalt supply chain in the DRC; focus on ASM	"supports key stakeholders to develop and implement strategies to reduce child labor and improve working conditions in" ASM mines and the wider supply chain of cobalt. Supports efforts to "raise awareness of the challenges and opportunities to combat child labor; build the enforcement capacity of government and other relevant stakeholders at the national, provincial, and local levels; and improve private sector monitoring and remediation of child labor violations in the cobalt supply chain. COTECCO also supports efforts to enhance implementation and enforcement of laws, policies, and action plans that address child labor and working conditions in artisanal and	U.S. Department of Labor Bureau of International Labor Affairs (n.d.)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					small-scale mining in the DRC's cobalt supply chain. In addition, the project works to increase transparency and monitoring of child labor and working conditions in cobalt mining supply chains, particularly in artisanal and small-scale mines. As such, the project is assisting the Government of the DRC to develop and implement a multi-stakeholder, sector-wide child labor monitoring system. COTECCO also is establishing Workers' Rights Centers to provide information and free legal assistance to support workers in the mining sector in the fight against child labor."	
IMPACT's Her Security project	IMPACT and Bon Pasteur Kolwezi, supported by the Good Shepherd International Foundation (GSIF)	Eight months in 2022	Funded by an RMI member, through the Responsible Business Alliance Foundation	Communities in Lualaba province	Research how improving women's security (physical, economic, and energy) in communities that artisanally mine copper and cobalt can contribute to livelihoods and reduce child labour, with the aim of providing an evidence basis for future programmes and policy measures. Methodology: desk research, community-based research, expert interviews. Focus groups and surveys with ASM communities and other Congolese stakeholders with Bon Pasteur Kolwezi	IMPACT et al. (2022)
Cobalt for Development (C4D)	Industry scheme/development project carried out by GIZ International Services	2019, for three years. "An extension is in discussion, which core elements an extended project will contain is at this moment not known."	Solely funded by "a cross-industry partnership including BASF, BMW, Samsung Electronics, Samsung SDI and Volkswagen Group."	ASM cobalt in the DRC	Support for a pilot ASM mine and neighbouring communities with the aim of bettering living and working conditions in these areas.	BGR (2021) Cobalt for Development (n.d.)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
Education to counter child labor	Good Shepherd International Foundation (GSIF)	2019-2022	Daimler AG (more than 1 million euros)	Kolwezi region: the project targets over 19,000 people, aiming to improve their lives by 2022	Five pillars. 1. Alternative livelihoods, particularly for women, like sustainable agriculture or sewing/tailoring. 2. Bon Pasteur offers safe community spaces for women and girls, where they can access education and healthcare. 3. Encouraging children to stop mine work and go to school. Teachers, social workers, psychologists, and nurses run age-appropriate programmes for children. 4. To "strengthen local communities for greater cohesion among the local population." 5 Support for GSIF-Bon Pasteur Kolwezi's human and material resources	Mercedes-Benz Group AG (2019)
The ERG (Metalkol) project with Bon Pasteur	Good Shepherd Sisters (GSIF)/Bon Pasteur	2017-2020 (January 2017 agreement for 2017; three-year extension announced in May 2017)	Eurasian Resources Group (ERG) (ERG-Africa)	Kolwezi, DRC	Support to the Bon Pasteur Alternative Livelihood Programme in Kolwezi, DRC "help break the cycle of violence and abuse against children and women in artisanal mining communities and improve their living conditions. The organisation is particularly focussed on supporting children who work in the mines and are involved in the worst forms of child labour." The first one-year agreement, throughout 2017, supported the growth of GSIF's Alternative Livelihood programme and aimed to "help increase food production on farming cooperatives and thus boost food availability and revenues". The three-year agreement provided "funding for a range of projects supporting all aspects of the Good Shepherd's programme: Alternative Livelihoods; Child Protection; Economic Empowerment; Citizenship Strengthening; and Capacity Building. ERG Africa, a subsidiary of ERG, will lead the	Eurasian Resources Group (2017b) Eurasian Resources Group (2017a)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					efforts of the Group through the Safety, Health, Environment and Community (SHEC) team under the direction of Dr Loes Schalekamp."	
Extractives for Developme nt	CSR Europe	2021-	The German Institute for International Development (GIZ) on behalf of the German Ministry of Economic Affairs and Development (BMZ)	Includes Congolese cobalt	CSR Europe will "set up local sustainability networks in two African countries with the goal of strengthening responsible sourcing and due diligence practices in the electric vehicles battery value chain." In November 2022 a sustainability workshop on 2C mining was organised in Kolwezi by CSR Europe, "to foster the sustainable and responsible sourcing of raw materials needed in the production of batteries for Electric Vehicles (EV) locally." The workshop was co-organised with the Federation of Companies of the Congo (FEC)'s Chamber of Mines.	CSR Europe (2021) CSR Europe (2022)
Sustainable economic developme nt in the mining sector (Enabling Self-Monitoring in the Artisanal Cobalt Sector)	GIZ, DRC Ministry of Planning Better Mining has worked in partnership with GIZ "to build the capacity of cooperatives to even go so far as to integrate the use of technology into their identification and management of risks. Better Mining did so by training the cooperatives	2019 to 2021	German Federal Ministry for Economic Cooperation and Development (BMZ)	Mining (including ASM cobalt) in Haut-Katanga and Lualaba; also South-Kivu and Kinshasa	Congolese support for creating and expanding local chains of production in the mining sector Participation and dialogue through support of arrangements for multi-stakeholder dialogue, such as Investissements Durables au Katanga (IDAK), Investissements Durables au Kivu (IDAKI) and Alternative Mining Indaba (AMI). Stakeholders include civil society representations, local and national government officials, and mining companies. The project also does capacity and skill building for civil society. Standards in cobalt ASM: Support to cooperatives for standard implementation. The project also planned to	GIZ (n.d.) RCS Global Group (2022)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
	to conduct self-monitoring of risks and incidents using the Better Mining methodology and mobile application. In addition, Better Mining field agents accompanied the cooperative members on a weekly basis in the data collection."				increase global delivery chain access. Promotion of local procurement: linking mining firms, small and medium-sized enterprises, and business development services, in order "to discover future local markets and identify the associated qualification requirements." The project also gave local subcontractors technical support to better align with market needs. Finally, the project brought vocational training programmes in line with mining sector demands.	
Mining Alternatives Project (MAP)	The MAP research study was carried out by the Congolese Centre Arrupe Pour La Recherche et La Formation (CARF) in collaboration with the Miller Center for Social Entrepreneurship, Santa Clara University.	Phase I: May 17–24, 2019. Phase II: July 11–17, 2019 and July 28 – August 2, 2019.	The Miller Center for Social Entrepreneurship, Santa Clara University	The mining communities of Lubumbashi, Lwisha, Fungurume, and Kolwezi	"Phase I: Assess the social, economic, and environmental impact of industrial and artisanal mining on these key mining communities, as well as local perceptions of the effectiveness of responsible sourcing initiatives for cobalt, such as traceability and certification. Phase II: Identify viable and effective alternatives to remove vulnerable women and children from industrial and artisanal mines and to improve family livelihoods in local mining communities in the DRC. Phase III: Investigate and analyze existing and planned programs with similar goals in DRC mining regions."	Nyembo et al. (2020)
Google/RMI project	Google, RMI	2018-2020	Google	ASM cobalt in the DRC	Research with RMI "to investigate the challenges surrounding cobalt and how upstream and downstream parties can work together. In 2021, the Responsible Sourcing Network published this research in its Cobalt Baseline Study, which will inform future action toward responsibility in	Google (2022)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
					cobalt mining."	
Youth Apprenticeship Program	Pact	2017-	Responsible Business Alliance	ASM sites in Kolwezi area, DRC	Alternatives to child labour in mining. Aimed at young people, ages 15 to 17, who work at ASM sites, and involves vocational education training "In each community, a detailed market study is undertaken to identify profitable and sustainable alternative trade sectors to mining. The selected apprentices then undergo a six-month intensive training program in a trade of their choice under the supervision of a local mentor (apprenticeship master) identified beforehand. Selected trades include: computer science, mechanics, soldering and metalwork, small animal husbandry, barbering, and tailoring. Upon graduation, support is provided for business start-up including initial start-up equipment, funding and entrepreneurial trainings."	Pact (n.d.-c) Pact (2020) Pact (n.d.-b)
Vocational education program for miners	The Phase 1 survey involved the INGO Pact, Kolwezi's largest businesses, the government, civil society; and vocational education institutions. In Phase 2, a survey was carried out to collect data from people engaged in trade. The Phase 2 survey aimed to check the validity of and home in on the most-cited trades from the Phase 1 survey	The study "Linking Vocational Education to the Economy in the DRC's Copperbelt" came out in April 2018	Apple Inc.	Kolwezi, copper and cobalt	Pact carried out this market study "to identify alternative employment options that can provide a suitable income, are or can be rendered adequately safe for 15-to17-year-olds in accordance with the ILO standards". The study was carried out in order to inform the development of a vocational education programme targeting miners aged 15 to 17 in six Kolwezi communities (Pact, 2018, p. 1-2).	Pact (2018)

Initiative	Participants	Year and/or duration	Funding	Scope	Content	Source
	(Pact, 2018, p. 2)					
The GSIF and Bon Pasteur Kolwezi Community Development Program	The Good Shepherd International Foundation and their local partner, Bon Pasteur Kolwezi, which is affiliated with the Good Shepherd sisters	Start year 2013	GSIF	ASM communities in Domaine Marial around Kolwezi	"a program in DRC to assist women, girls and children from artisanal mining communities of Domaine Marial, an isolated, impoverished and underserved cobalt mining area around the city of Kolwezi. Over the years the program, through a holistic model of intervention integrating education, alternative livelihoods and social protection was able to reach more than 20,000 people in 8 artisanal mining communities."	Good Shepherd International Foundation (n.d.)

Digital technologies and blockchain

Technology-enabled solutions to responsible sourcing are increasingly on the rise and developed in particular in the battery minerals sector, including in cobalt, nickel, and related minerals. Beyond the establishment of blockchain systems for these materials, gold in particular has seen efforts to geolocalise its production. The geoforensic passport constitutes another technological approach, which "validates the origin of the gold based on its composition" (Scheer, 2022, p. 31).

Blockchain systems utilize distributed ledger technologies (DLT) to store information in multiple locations. Applied to the mining sector, this technology allows for the "record[ing] and publish[ing][of] transactions through a peer-to-peer and tamper-proof block structure, and operate securely through a consensus-based algorithm" (Calvao & Gronwald, 2019). Blockchains were first explored in the case of the Kimberley Certification Program Scheme (KCPS) in an effort to address the provision of falsified documentation. The 'paternity test' for diamonds has now been also piloted in gold and cobalt, respectively with non-profit IMPACT (IMPACT, n.d.-b) and among others, consulting firm RCS Global Group (n.d.-b). The Congolese cobalt sector in particular has seen a flurry of blockchain-enabled technology solutions to the challenges of sourcing the battery mineral in a jurisdiction considered high-risk.

RCS Global Group's Vine platform combined a blockchain approach to auditing systems to provide clients with an easily accessible visualization of their supply chain, associated risks, and a series of quantitative information on each supplier. The initiative is the successor of

the Responsible Sourcing Blockchain Network (RSBN). Based on a conceptualization of transparency that echoes other blockchain systems, the Vine platform builds on the company's respective branches, such as Better Mining, and its large auditing department to feed in information on the platform.

While Vine combines industrial and artisanal mining, as well as the midstream and downstream supply chains, other initiatives focus on the industrial side of the supply. In 2021 China Molybdenum (CMOC), Eurasian Resources Group (ERG), and Glencore established the ReISource pilot project (Glencore, 2021). The pilot is also linked to midstream refiner Umicore and downstream purchaser Tesla. The initiative aims at tracing cobalt from industrial operations of these three mining companies to the final battery products and electric vehicles, using a mass balanced approach in which input and output are measured at each step along the way. As for Vine, the integration of standards - including the Copper Mark, the CIRAF, and the RMAP as well as the focus on greenhouse gas (GhG) emissions - also links ReISource to broader interventions, including the Battery Passport of the Global Battery Alliance. In January 2023 ReISource and the GBA presented two EV battery passport pilots at the World Economic Forum, based on example data from Tesla and Audi (ReSource, 2023).

The Congolese private company SudSouth, which has been appointed by the Provincial Government of Lualaba to manage the Musompo *Centre de négoce*, is implementing the blockchain-based traceability platform Minespider to track cobalt sourced from artisanal and small-scale mines (Owen, 2022). This traceability system is designed in cooperation with the CEEC, the DRC government agency in charge of mineral certification and traceability, and is being presented as a "unique approach to bottom-up traceability" (idem). The platform enables companies to carry out end-to-end mineral tracking, from mining sites in Lualaba province to the Musompo trading center and to industry clients, and to create digital IDs such as Battery Passports and Product Passports.

This range of projects and platforms demonstrate how blockchain is increasingly being presented as a due diligence tool and a driver for transparency and sustainability along complex supply chains. Simultaneously, a growing amount of literature is addressing the limitations of digital technologies as the solution to responsible sourcing. Using blockchain to track cobalt would necessitate "an accountability architecture to function properly," which should include the "Monitoring of many fragmented mining sites", "Buy-in from all stakeholders", and "Assurance of data accuracy" (Chohan, 2022, p. 2). Yet unlike the diamond sector, where blockchain has been used for tracking gems, the supply chain for cobalt in the DRC "is characterized by a higher degree of complexity than the diamond one, with more than double as many procedural steps in its extraction than in diamonds. This is exacerbated by weak extant accountability and oversight mechanisms" (idem, p. 3). Potential challenges include the mixing of "ethical" and "problematic" cobalt (idem, p. 3).

Grimstad Bang and Johansson (2019) emphasize that when it comes to blockchain-based initiatives, creating transparency is a necessary but not sufficient step in responsible sourcing. Bernards et al. (2022) go beyond this when arguing that these initiatives not only fail to address sustainability issues, but construct a 'veil of transparency' over governance failures and sustainability abuses. While digital technologies and blockchain strategies have the potential to ensure the immutability of the information all the way to the downstream purchaser, the system does not ensure the quality of the information first inputted. Issues such as audit quality, auditor training, and monitoring weaknesses still impact the ability of the platform to effectively transfer the adequate information to its clients. Therefore, Bernards et al. (2022) highlight that although these technologies promise technical and informational transparency, they obscure and depoliticize the political decisions made when including and excluding particular types of information. Hence, the tool becomes a transparency effort more than an actual change maker on the ground.

Regarding **participation**, Calvão and Archer (2021) unveil how digital technologies risk excluding small-scale miners. Similar to Bernards et al. (2022), they highlight the underlying political and social dynamics of who has access and control over the collection and input from data. Their analysis demonstrates how blockchain-based technologies often fail to foster "data agency", creating political and technological barriers for small-scale miners to access and control the digital platforms, eventually leading to consumer-centered rather than producer-centered models of sustainability. Recently, for example, human rights groups expressed concern about the "battery passport," which is supported by Tesla among others, and the prominent role played in it by mining firms that have been under scrutiny and even investigation for their corporate activities (Jolly, 2023). Gray (2023), meanwhile, highlights the need to more thoroughly examine and theorize the colonial nature of how data is produced, appropriated, and shared. She contends that critical research has to go beyond simply identifying the extractive nature of data practices as a colonial power dynamic and engage in more wide-ranging and unified research on how data practices that dispossess are not only an integral part of and governed by colonial relationships, but also reproduce these relations. Specifically, data is not simply powerful due to the fact that it yields value in the context of a new frontier of extraction. Instead, a key dynamic at work is the interplay between "shifting orders of knowledge and orders of value, brought about by datafication, which creates the conditions for a new apparatus of racialized dispossession." (Gray, 2023, p. 3) Colonialism continues to have epistemic violence as one of its central features, which includes "the destruction and extraction of Indigenous knowledges" (ibid). Throughout history, epistemic violence has been used to justify dispossession (ibid).

Discussion and Conclusion

Our review of ethical supply chain initiatives has addressed, first, international governance instruments aiming to regulate the sourcing of minerals from CAHRA's, and more specifically 3TG and cobalt from the DRC. Second, we have given an – incomplete – overview of on-the-ground initiatives, programmes and projects for responsible sourcing from the region, which can be considered as a kind of laboratory for such initiatives. While the impact and reach of these initiatives has been disputed, our aim in this paper was not to evaluate the impact on the ground, but rather to describe and categorize the different initiatives to lay the groundwork for further research on the participation of small-scale producers in the design, implementation, and governance of transnational initiatives. This will be done in the framework of the "Driving Change" research project (2022-2026) funded by the Research Foundation Flanders.

In our analysis of governance instruments and responsible sourcing programmes, we have paid special attention to participation, transparency and accountability. In particular, we have shown whether and how current initiatives have conceived or implemented measures to encourage participation by those involved in mineral production at the upstream level. We have highlighted whether or not information is publicly available, and whether or not governing and implementing actors can be held accountable by the people who are most affected by their measures. However, it was not always possible to find information on the extent to which small-scale producers and affected communities participate, or how they might hold governing actors accountable, which in itself is already quite revealing in terms of transparency.

With respect to participation, we can conclude that especially some of the more recent responsible sourcing programmes do include small-scale producers and affected communities, more so in the implementation than in the design of the initiatives. Initiatives such as Kufatilia and Matokeo use simple SMS technology to allow as many people as possible to participate in incident reporting. Moreover, they involve Congolese civil society organizations to follow up on these incidents. Although there are still clear limitations in terms of who has access to a phone and phone credit, and who is aware of the possibility and convinced of the usefulness of reporting incidents, these are important developments in terms of participation. ITSCI also organizes "local stakeholder meetings" to monitor incidents. After having been dormant for some years they were (re)activated, and since 2020 ITSCI publishes dates and number of participants on its website. Following up on reported incidents is crucial to examine the impacts of due diligence on the ground.

At the level of the governance instruments, public consultations are a frequently used tool to enhance participation. These are often conducted by sending out questionnaires, and seeking to reach a wide range of stakeholders. Consultations may also take place through face-to-face or online meetings and stakeholder events. However in both cases, the question of representation arises, as even if efforts are made to include Congolese

stakeholders, it remains unclear how representative these organizations are of the people who are most affected by supply chain risks. Preliminary research has shown that most small-scale producers in the visited mines are unaware of most of the initiatives described in this paper. There is a need to communicate in accessible ways about them. Stakeholders involved with different initiatives are aware of the need to carry out outreach. For instance, the IMPACT and Resolve Report from Stakeholder Consultations on the ASM Cobalt ESG Management Framework noted that "There are also several, critical regional or sector-wide activities to fund regarding […] general communications and awareness raising about the Framework itself, and the funding model." Potential ideas through which initiatives can be communicated include visual materials, which "could be distributed via on-site visits, WhatsApp, radio spots, social media, local "champions" or leaders, and local NGOs." (IMPACT & RESOLVE, 2021, pp. 30-31)

More fundamental critiques can also be raised on what constitute a risk, who is able to define risk, and who needs to be protected. In an article on the production of risk and uncertainly in gold production, Geenen (2018, p. 31) states that "risks are objects of political struggles, whereby financially and politically powerful actors get to define what is risky and what not, how and to what extent the risks should be managed, who is accountable and who is to blame". She adds that "with the burgeoning of risk audit firms and consultancies, the handling of risk itself has become big business" (ibid). In a similarly critical way and of relevance for mining, Châteauvert-Gagnon (2022, p. 289) has argued that the priority focus on child labour and pregnant women in international security "infantilizes women and confines them to/conflates them with their role as mothers," as seen in the ban on pregnant women at mine sites and the focus on preventing their entry. It "also places children as the ultimate 'beautiful soul' in need of protection: pure, innocent and completely dependent", which actually makes children more vulnerable by silencing them (ibid). The question how small-scale producers themselves perceive risk and vulnerability and, for that matter, responsibility, will be further explored in the Driving Change project. It will take into account alternative knowledge and normative system that shape supply chains from the bottom up, but that are too often invisibilized by current governance instruments and responsible sourcing programmes.

Reference List

(BSI), T. B. S. I. (n.d.). *What is a standard?* https://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/

(OHCHR), T. O. o. t. H. C. f. H. R. (n.d.). Corporate human rights due diligence – identifying and leveraging emerging practices. https://www.ohchr.org/en/special-procedures/wg-business/corporate-human-rights-due-diligence-identifying-and-leveraging-emerging-practices

African Development Bank Group. (2023). *Democratic Republic of Congo - Support Project for Alternative Welfare of Children and Young People Involved in the Cobalt Supply Chain (PABEA-COBALT)*. https://projectsportal.afdb.org/dataportal/VProject/show/P-CD-I00-010

Alliance for Responsible Mining (ARM). (2018). *CRAFT Code of Risk-mitigation for artisanal and small-scale mining engaging in Formal Trade*. https://www.responsiblemines.org/wp-content/uploads/2018/08/2018-07-31-CRAFT-Code-v-1.0-EN.pdf

Alliance for Responsible Mining Foundation. (2014). *Fairmined standard for gold from artisanal and small-scale mining, including associated precious metals*. https://www.responsiblemines.org/wp-content/uploads/2017/05/Fairmined-Stnd-2-0_2014_.pdf

Amnesty International. (2013). *Democratic Republic of the Congo: Profits and loss: Mining and human rights in Katanga, Democratic Republic of the Congo*. https://www.amnesty.org/en/documents/afr62/001/2013/en/

Amnesty International, & Afrewatch. (2016). *Democratic Republic of Congo: "This is what we die for": Human rights abuses in the Democratic Republic of the Congo power the global trade in cobalt*. https://www.amnesty.org/en/documents/afr62/3183/2016/en/

Arian, H. (2021). *The Contradictions of a Clean Cobalt Commitment* Utrecht University]. https://studenttheses.uu.nl/bitstream/handle/20.500.12932/71/Hadassah%20Arian%20Thesis%20Contradictions%20of%20a%20Clean%20Cobalt%20Commitment%20July%202021.pdf?sequence=1&isAllowed=y

Arthur-Holmes, F., Busia, K. A., & Katz-Lavigne, S. (2023). 'We don't joke with our money': Gender-based occupational segregation and women's remuneration negotiations in artisanal and small-scale mining. *Resources Policy, 80*, 103188.

Autesserre, S. (2012). Dangerous tales: Dominant narratives on the Congo and their unintended consequences. *African Affairs, 111*(443), 202-222. https://doi.org/10.1093/afraf/adr080

Banza Lubaba Nkulu, C., Casas, L., Haufroid, V., De Putter, T., Saenen, N. D., Kayembe-Kitenge, T., Musa Obadia, P., Kyanika Wa Mukoma, D., Lunda Ilunga, J.-M., Nawrot, T. S., Luboya Numbi,

O., Smolders, E., & Nemery, B. (2018, 2018/09/01). Sustainability of artisanal mining of cobalt in DR Congo. *Nature Sustainability, 1*(9), 495-504. https://doi.org/10.1038/s41893-018-0139-4

Bashwira, M.-R., & Cuvelier, J. (2019, 2019/07/01/). Women, mining and power in southeastern Democratic Republic of Congo: The case of Kisengo. *The Extractive Industries and Society, 6*(3), 960-967. https://doi.org/https://doi.org/10.1016/j.exis.2019.02.010

Bashwira, M.-R., Cuvelier, J., Hilhorst, D., & van der Haar, G. (2014, 2014/06/01/). Not only a man's world: Women's involvement in artisanal mining in eastern DRC. *Resources Policy, 40*, 109-116. https://doi.org/https://doi.org/10.1016/j.resourpol.2013.11.002

Bashwira, M. (2017). Navigating obstacles, opportunities and reforms: Women's lives and livelihoods in artisanal mining communities in eastern DRC. *Wageningen University, Wageningen, the Netherlands PhD thesis*.

Baumann-Pauly, D. (2023). *Cobalt Mining in the Democratic Republic of the Congo: Addressing Root Causes of Human Rights Abuses*.

Baumann-Pauly, D., & Trabelsi, L. (2021). Complementing Mandatory Human Rights Due Diligence: Using Multi-Stakeholder Initiatives to Define Human Rights Standards. *NYU Stern School of Business Forthcoming*.

Bayer, C. N., & Cooper, A. (2019). *Worst Forms of Child Labour in the Democratic Republic of the Congo: Cobalt Refiner Due Diligence Reporting*.

Bernards, N., Campbell-Verduyn, M., & Rodima-Taylor, D. (2022). The veil of transparency: Blockchain and sustainability governance in global supply chains. *Environment and Planning C: Politics and Space*, 23996544221142763.

BGR. (2021). *Mining Conditions and Trading Networks in Artisanal Copper-Cobalt Supply Chains in the Democratic Republic of the Congo*. https://www.bgr.bund.de/EN/Themen/Min_rohstoffe/Downloads/lieferketten_abbaubedingungen_artisanaler_Cu-Co-Sektor_DR_Kongo_en.html

BGR. (2022). *Sustainability Standard Systems for Mineral Resources A Comparative Overview – 2022*. https://www.deutsche-rohstoffagentur.de/DE/Themen/Min_rohstoffe/Downloads/studie_sustainability_standard_systems_2022.pdf?__blob=publicationFile&v=9

BGR. (n.d.). *Certified Trading Chains*. https://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Concept_MC/CTC-Standards-Principles/ctc_standards-principles_node_en.html

Bloomfield, M. J., & Manchanda, N. (2023). Business, power, and private regulatory governance: Shaping subjectivities and limiting possibilities in the gold supply chain. *Regulation & Governance, n/a*(n/a). https://doi.org/https://doi.org/10.1111/rego.12522

Blowfield, M., & Dolan, C. S. (2014, 2014/01/02). Business as a development agent: evidence of possibility and improbability. *Third World Quarterly, 35*(1), 22-42. https://doi.org/10.1080/01436597.2013.868982

Boström, M., Jönsson, A. M., Lockie, S., Mol, A. P., & Oosterveer, P. (2015). Sustainable and responsible supply chain governance: challenges and opportunities. *Journal of Cleaner Production, 107*, 1-7.

Brier, G. d., Arian, H., & Hoex, L. (2021). *IPIS Due Diligence series – Comparative analysis between cobalt and 3T sourcing from the DRC*. https://ipisresearch.be/publication/ipis-due-diligence-series-comparative-analysis-between-cobalt-and-3t-sourcing-from-the-drc/

Brier, G. d., & Merket, H. (2017). *Artisanal Gold Monitoring Pilot Monitoring report Artisanal Gold Monitoring Pilot in Mambasa, Ituri*.

Brinks, D., Dehm, J., Engle, K., & Taylor, K. (Eds.). (2021). *Power, Participation, and Private Regulatory Initiatives: Human Rights Under Supply Chain Capitalism*. University of Pennsylvania Press.

Brottem, L. V., & Ba, L. (2019, 2019/10/01/). Gendered livelihoods and land tenure: The case of artisanal gold miners in Mali, West Africa. *Geoforum, 105*, 54-62. https://doi.org/https://doi.org/10.1016/j.geoforum.2019.07.005

Bryceson, D. F., Jønsson, J. B., & Verbrugge, H. (2013). Prostitution or partnership? Wifestyles in Tanzanian artisanal gold-mining settlements. *The Journal of Modern African Studies, 51*(1), 33-56. https://doi.org/10.1017/S0022278X12000547

Buchanan, S., & Marques, J. C. (2018, 2018/01/01/). How home country industry associations influence MNE international CSR practices: Evidence from the Canadian mining industry. *Journal of World Business, 53*(1), 63-74. https://doi.org/https://doi.org/10.1016/j.jwb.2017.07.005

Buhmann, K. (2017). Chinese Human Rights Guidance on Minerals Sourcing: Building Soft Power. *Journal of Current Chinese Affairs, 46*(2), 135-154. https://doi.org/10.1177/186810261704600206

Buhmann, K. (2018). Chinese Mineral Sourcing Interests & Greenland's Potential as a Source of 'Conflict-Free Minerals'. In. https://research.cbs.dk/en/publications/chinese-mineral-sourcing-interests-amp-greenlands-potential-as-a-

bundesanstalt für Geowissenschaften und Rohstoffe (BGR). (n.d.). *Introduction to the Analytical Fingerprint*. https://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Analytical-Fingerprint/analytical_fingerprint_node_en.html

Buraye, J. K., Byemba, G. K., & Mukasa, A. N. (2013). Traçabilité des produits miniers dans les zones de conflit au Sud-Kivu. In *Conjonctures congolaises*. L'Harmattan. https://www.eca-creac.eu/sites/default/files/pdf/2012-05-mukasa.pdf

Business & Human Rights Resource Centre. (n.d.). *UN Guiding Principles*. https://www.business-humanrights.org/en/big-issues/un-guiding-principles-on-business-human-rights/

Buss, D., Rutherford, B., Stewart, J., Côté, G. E., Sebina-Zziwa, A., Kibombo, R., Hinton, J., & Lebert, J. (2019, 2019/11/01/). Gender and artisanal and small-scale mining: implications for formalization. *The Extractive Industries and Society, 6*(4), 1101-1112. https://doi.org/https://doi.org/10.1016/j.exis.2019.10.010

Byemba, G. K. (2020, 2020/04/01/). Formalization of artisanal and small-scale mining in eastern Democratic Republic of the Congo: An opportunity for women in the new tin, tantalum, tungsten and gold (3TG) supply chain? *The Extractive Industries and Society, 7*(2), 420-427. https://doi.org/https://doi.org/10.1016/j.exis.2020.03.001

Callaway, A. (2017). *Demand the Supply: Ranking Consumer Electronics and Jewelry Retail Companies on their Efforts to Develop Conflict-Free Minerals Supply Chains from Congo*. https://enoughproject.org/demandthesupply#Download

Calvão, F., & Archer, M. (2021, 2021/05/01/). Digital extraction: Blockchain traceability in mineral supply chains. *Political Geography, 87*, 102381. https://doi.org/https://doi.org/10.1016/j.polgeo.2021.102381

Calvao, F., & Gronwald, V. (2019). Blockchain in the mining industry: Implications for sustainable development in Africa.

Calvão, F., McDonald, C. E. A., & Bolay, M. (2021, 2021/12/01/). Cobalt mining and the corporate outsourcing of responsibility in the Democratic Republic of Congo. *The Extractive Industries and Society, 8*(4), 100884. https://doi.org/https://doi.org/10.1016/j.exis.2021.02.004

Carodenuto, S., Cisneros, R. B., Grant, H., & Rebitt, S. (2022). *Trend Report 2022 Cacao Origin Relationship Transparency in the Specialty Chocolate Industry*. https://drive.google.com/file/d/17cpdJKb4G5QMqPQ7SOSTojTCeMzn0eNN/view

Cernic, J. L. (2008). Corporate Responsibility for Human Rights: A Critical Analysis of the OECD Guidelines for Multinational Enterprises International Law. *Hanse L. Rev., 4*, 71.

Chalmers, B., Gardiner, E., Gelfand, J., & Shea, T. (2012). TSM in action : the Mining Association of Canada's "Towards Sustainable Mining" initiative [Text]. https://open.library.ubc.ca/collections/59367/items/1.0042625

Chambers Federation. (n.d.). *Fair Congo Initiatives*. http://chambersfederation.com/fair-congo-project/

Châteauvert-Gagnon, B. (2022). 'How dare she?!': Parrhesiastic resistance and the logics of protection of/in international security. *Security Dialogue, 53*(4), 281-301. https://doi.org/10.1177/09670106221090830

Cheyns, K., Nkulu, C. B. L., Ngombe, L. K., Asosa, J. N., Haufroid, V., De Putter, T., Nawrot, T., Kimpanga, C. M., Numbi, O. L., & Ilunga, B. K. (2014). Pathways of human exposure to cobalt in Katanga, a mining area of the DR Congo. *Science of the total environment, 490*, 313-321.

Chinese Chamber of Commerce for Metals, M. C. C. I. E. (2015). *Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains*. file:///C:/Users/SKatzLavigne/Downloads/201512_Chinese_Due_Diligence_Guidelines_for_Responsible_Mineral_Supply_Chains_-_En_K83fxzt%20(1).pdf

Chohan, U. W. (2022). Blockchain and the Extractive Industries: Cobalt Case Study. https://doi.org/http://dx.doi.org/10.2139/ssrn.3138271

Cibaye, B. B., & CIGOHO, I. I. (2021). *Analyse des incidents liés aux chaînes d'approvisionnement en minerais des filières stannifères et aurifères (3T+G) dans les Territoires de Walungu et Kabare au Sud-Kivu.* https://ipisresearch.be/wp-content/uploads/2021/02/Voix-du-Congo_Analyse-des-incidents-lie%CC%81s-aux-chai%CC%82nes-dapprovisionnement-en-minerais-des-filie%CC%80res-stannife%CC%80res-et-aurife%CC%80res-3TGTerritoires-de-Walungu-et-Kabare-Sud-Kivu.pdf

Cieslik, K. J., Leeuwis, C., Dewulf, A. R. P. J., Lie, R., Werners, S. E., van Wessel, M., Feindt, P., & Struik, P. C. (2018, 2018/11/01/). Addressing socio-ecological development challenges in the digital age: Exploring the potential of Environmental Virtual Observatories for Connective Action (EVOCA). *NJAS - Wageningen Journal of Life Sciences, 86-87*, 2-11. https://doi.org/https://doi.org/10.1016/j.njas.2018.07.006

Cobalt for Development. (n.d.). *About Us*. https://cobalt4development.com/about-us#:~:text=What%20is%20Cobalt%20for%20Development,Samsung%20SDI%20and%20Volkswagen%20Group.

Cobalt Institute. (2019). *CIRAF PRIMER FOR STAKEHOLDERS*

Cobalt Institute. (2022). *CIRAF Update: Reporting Obligation Hiatus*. https://www.cobaltinstitute.org/news/ciraf-update-reporting-obligation-hiatus/

Cobalt Institute. (2023). *Cobalt Market Report 2022*. https://www.cobaltinstitute.org/resource/cobalt-market-report-2022/

Cobalt Institute. (n.d.-a). About Us. https://www.cobaltinstitute.org/

Cobalt Institute. (n.d.-b). *Cobalt Industry Responsible Assessment Framework (CIRAF)*. https://www.cobaltinstitute.org/responsible-sourcing/industry-responsible-assessment-framework-ciraf/

Cobalt Institute. (n.d.-c). *Cobalt Mining*. https://www.cobaltinstitute.org/about-cobalt/cobalt-life-cycle/cobalt-mining/

Cobalt Institute. (n.d.-d). *Contact us*. https://www.cobaltinstitute.org/about-us/contact/

Conroy, M. E. (2007). *Branded!: how the'certification revolution'is transforming global corporations*. New Society Publishers.

Coordination des actions de la société civile. (2021). *Communiqué de presse: Pour être performante EGC doit impérativement jouer la carte de la transparence* https://congomines.org/system/attachments/assets/000/002/044/original/EGC_Compress_SC_26042021.pdf?1619646819

Côté, G. E., Kalagala, C. K., Hinton, J., Gitu, L., & Singo, P. (2020). *Toolkit: Gender Impact Assessments for Projects and Policies Related to Artisanal and Small-Scale Mining*. https://impacttransform.org/wp-content/uploads/2020/12/IMPACT-GIA-Toolkit_EN-2020_web.pdf

CSR Europe. (2021). *Sustainable Sourcing is the First Step Towards Circularity*. https://www.csreurope.org/newsbundle-articles/sustainable-sourcing-is-the-first-step-towards-circularity#:~:text=In%20the%20project%20%E2%80%9CExtractives%20for,electric%20vehicles%20battery%20value%20chain.

CSR Europe. (2022). CSR Europe Set to Deliver Sustainability Atelier on Copper-Cobalt Mining in the DRC. CSR Europe Set to Deliver Sustainability Atelier on Copper-Cobalt Mining in the DRC

Curran, D. (2019). Indigenous Processes of Consent: Repoliticizing Water Governance through Legal Pluralism. *Water, 11*(3), 571. https://www.mdpi.com/2073-4441/11/3/571

Cuvelier, J., Van Bockstael, S., Vlassenroot, K., & Wakenge, C. I. (2014). Analyzing the impact of the Dodd-Frank Act on Congolese livelihoods.

Davarnejad, L. (2011). In the shadow of soft law: the handling of corporate social responsibility disputes under the OECD guidelines for multinational enterprises. *J. Disp. Resol.*, 351.

De Haan, J., & Geenen, S. (2016). Mining cooperatives in Eastern DRC The interplay between historical power relations and formal institutions. *The Extractive Industries and Society, 3*(3), 823-831.

de Neve, G. (2009). Power, Inequality and Corporate Social Responsibility: The Politics of Ethical Compliance in the South Indian Garment Industry. *Economic and Political Weekly, 44*(22), 63-71. http://www.jstor.org/stable/40279059

De Neve, G. (2014). Fordism, flexible specialization and CSR: How Indian garment workers critique neoliberal labour regimes. *Ethnography, 15*(2), 184-207. https://doi.org/10.1177/1466138112463801

Deberdt, R. (2021a). *Baseline Study of Artisanal and Small-Scale Cobalt Mining in the Democratic Republic of the Congo*. https://www.sourcingnetwork.org/cobalt-study-download-page

Deberdt, R. (2021b, 2021/12/01/). The Democratic Republic of the Congo (DRC)'s response to artisanal cobalt mining: The Entreprise Générale du Cobalt (EGC). *The Extractive Industries and Society, 8*(4), 101013. https://doi.org/https://doi.org/10.1016/j.exis.2021.101013

Deberdt, R. (2022, 2022/03/01/). Land access rights in minerals' responsible sourcing. The case of cobalt in the Democratic Republic of the Congo. *Resources Policy, 75*, 102534. https://doi.org/https://doi.org/10.1016/j.resourpol.2021.102534

Deberdt, R., & Billon, P. L. (2021, 2021/12/01/). Conflict minerals and battery materials supply chains: A mapping review of responsible sourcing initiatives. *The Extractive Industries and Society, 8*(4), 100935. https://doi.org/https://doi.org/10.1016/j.exis.2021.100935

Deberdt, R., & Le Billon, P. (2022, 2022/07/03). The Green Transition in Context—Cobalt Responsible Sourcing for Battery Manufacturing. *Society & Natural Resources, 35*(7), 784-803. https://doi.org/10.1080/08941920.2022.2049410

Diemel, J. A., & Cuvelier, J. (2015, 2015/12/01/). Explaining the uneven distribution of conflict-mineral policy implementation in the Democratic Republic of the Congo: The role of the Katanga policy network (2009–2011). *Resources Policy, 46*, 151-160. https://doi.org/https://doi.org/10.1016/j.resourpol.2015.09.006

Diemel, J. A., & Hilhorst, D. J. M. (2019). Unintended consequences or ambivalent policy objectives? Conflict minerals and mining reform in the Democratic Republic of Congo. *Development Policy Review, 37*(4), 453-469. https://doi.org/https://doi.org/10.1111/dpr.12372

Dranginis, H. (2016). *Point of Origin: Status Report on the Impact of Dodd-Frank 1502 in Congo*. https://enoughproject.org/files/DRC_PointofOrigin_022016.pdf

Dubai Multi Commodities Centre (DMCC). (2020). *DMCC Rules for Risk Based Due Diligence in the Gold and Precious Metals Supply Chain Version 2/2020*. https://www.dmcc.ae/application/files/3116/0083/7591/DMCC_Rules_RBD_GPM_-_v2__Final_002.pdf

Earthworks. (n.d.). *The Initiative for Responsible Mining Assurance*. https://earthworks.org/issues/the-initiative-for-responsible-mining-assurance/

Eftimie, A., Heller, K., Strongman, J., Hinton, J., Lahiri-Dutt, K., & Mutemeri, N. (2012). *Gender Dimensions of Artisanal and Small-Scale Mining : A Rapid Assessment Toolkit*. http://hdl.handle.net/10986/2731

El Masri, Y., Cin, M., Furtado, K., Minoia, P., & Süleymanoğlu-Kürüm, R. (2023). Understanding epistemic erasures of local & indigenous communities: Decolonizing research and re-imagining alternative partnerships in Development Studies. *EADI Debating Development Blog*. http://www.developmentresearch.eu/?p=1425

Els, F. (2020). *Cobalt price: BMW avoids the Congo conundrum – for now*. https://www.mining.com/cobalt-price-bmw-avoids-the-congo-conundrum-for-now/

Emerging Markets Sustainability Dialogues. (2014). *Launch Of Guidelines For Responsible Outbound Mining Investment | 2014*. https://emsdialogues.org/events/launch-of-guidelines-for-responsible-outbound-mining-investment-2014

Entreprise Générale du Cobalt (EGC). (2021). *EGC Responsible Sourcing Standard*. https://www.trafigura.com/media/3098/2021_trafigura_egc_responsible_sourcing_standards_english.pdf

EPRM Secretariat. (2020). *Project deep dive Incident Reporting and Monitoring*. https://europeanpartnership-responsibleminerals.eu/blog/view/4995a3be-69de-48c2-a24d-958d1486afb0/project-deep-dive-incident-reporting-and-monitoring

EurAc. (2017). *Mesures d'accompagnement au Règlement de l'UE sur l'approvisionnement responsable en minerais : Pour un renforcement de la gouvernance du secteur minier artisanal en RDC*. https://www.eurac-network.org/sites/default/files/fr_web_brochure_reglement_minerais_march_2017_-_final_0.pdf

Eurasian Resources Group. (2017a). *Eurasian Resources Group extends its Agreement with the Fondazione Internazionale Buon Pastore Onlus*. https://www.eurasianresources.lu/en/news/eurasian-resources-group-extends-its-agreement-with-the-fon

Eurasian Resources Group. (2017b). *Eurasian Resources Group partners with the Good Shepherd Sisters to support the Bon Pasteur Alternative Livelihood Programme*.

https://www.eurasianresources.lu/en/news/eurasian-resources-group-partners-with-the-good-shepherd-si

Eurasian Resources Group. (2018). *Clean Cobalt Framework*. https://eurasianresources.lu/uploads/1/files/ERG%20Clean%20Cobalt%20Framework.pdf

Eurasian Resources Group. (2019). Metalkol RTR Clean Cobalt Performance Report. https://www.eurasianresources.lu/uploads/1/files/Metalkol%20Performance%20report.pdf

Eurasian Resources Group. (2022). *Clean Copper & Cobalt Framework*. https://www.eurasianresources.lu/uploads/1/files/ERG-Clean-Cobalt-and-Copper-Framework-September-2022.pdf

European Commission. (2020a). *Commission Staff Working Document: Impact Assessment Report*. https://eur-lex.europa.eu/resource.html?uri=cellar:5ee7d299-3ad8-11eb-b27b-01aa75ed71a1.0001.02/DOC_2&format=PDF#page=9

European Commission. (2020b). *Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020*. https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2020/0798/COM_COM(2020)0798_EN.pdf

European Commission. (2022). *Green Deal: EU agrees new law on more sustainable and circular batteries to support EU's energy transition and competitive industry* https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7588

Extractive Industries Transparency Initiative (EITI). (2019). *EITI Standard*. https://eiti.org/collections/eiti-standard

Faber, B., Krause, B., & Sánchez De La Sierra, R. (2017). *Artisanal Mining, Livelihoods, and Child Labor in the Cobalt Supply Chain of the Democratic Republic of Congo*.

Fair Cobalt Alliance. (2022). *Annual Report 2022*. https://www.faircobaltalliance.org/wp-content/uploads/2023/02/fca_report-annual-2022_final-digital.pdf

Fair Cobalt Alliance. (n.d.-a). *Governance*. https://www.faircobaltalliance.org/about-us/governance/

Fair Cobalt Alliance. (n.d.-b). *Local Partners*. https://www.faircobaltalliance.org/supply-chain-wide-collaboration/local-partners/

Fair Cobalt Alliance. (n.d.-c). *Our Approach*. https://www.faircobaltalliance.org/approach/

Fair Cobalt Alliance. (n.d.-d). *Our Members*. https://www.faircobaltalliance.org/supply-chain-wide-collaboration/our-members/

Fairtrade International. (2013). *Fairtrade Standard for Gold and Associated Precious Metals for Artisanal and Small-Scale Mining*. https://files.fairtrade.net/standards/2015-04-15_EN_Gold-and-Precious_Metals.pdf

Financial Services Committee. (2014). *Hearing: Hearing entitled "Assessing the Impact of the Dodd-Frank Act Four Years Later"*. https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=388239

Fisher, E., Luning, S., D'Angelo, L., Araujo, C. H. X., Arnaldi de Balme, L., Calvimontes, J., van de Camp, E., da Costa Ferreira, L., Lanzano, C., Massaro, L., Ouédraogo, A., Mello, J. P., Pijpers, R. J., Obodai Provençal, N., Resende de Moraes, R., Sawadogo, C., de Theije, M., de Tomi, G., Tuhumwire, M., & Twongyirwe, R. (2021, 2021/04/01/). Transforming matters: sustaining gold lifeways in artisanal and small-scale mining. *Current Opinion in Environmental Sustainability, 49*, 190-200. https://doi.org/https://doi.org/10.1016/j.cosust.2021.06.010

Fitzpatrick, P., Fonseca, A., & McAllister, M. L. (2011, 2011/03/01/). From the Whitehorse Mining Initiative Towards Sustainable Mining: lessons learned. *Journal of Cleaner Production, 19*(4), 376-384. https://doi.org/https://doi.org/10.1016/j.jclepro.2010.10.013

Fox, J. (2007). The uncertain relationship between transparency and accountability. *Development in practice, 17*(4-5), 663-671.

Franciscans International. (2017). *Vers un traite international pour une responsabilité effective des entrerises pour les abus de droits de l'homme Cas du site minier Bisie dans le territoire de Walikale en République démocratique du Congo*. https://franciscansinternational.org/fileadmin/media/2017/Global/Publications/Case_Study_-_DRC_2017_FINAL.pdf

Gardner, T. A., Benzie, M., Börner, J., Dawkins, E., Fick, S., Garrett, R., Godar, J., Grimard, A., Lake, S., Larsen, R. K., Mardas, N., McDermott, C. L., Meyfroidt, P., Osbeck, M., Persson, M., Sembres, T., Suavet, C., Strassburg, B., Trevisan, A., West, C., & Wolvekamp, P. (2019, 2019/09/01/). Transparency and sustainability in global commodity supply chains. *World Development, 121*, 163-177. https://doi.org/https://doi.org/10.1016/j.worlddev.2018.05.025

Garrett, N., Brulhart, M., & Eslava, N. (2015). *Pilot Study: Advancing Transparency in Artisanal and Small-Scale Mining and the Mineral Supply Chains in the Great Lakes Region*. https://delvedatabase.org/resources/pilot-study-advancing-transparency-in-artisanal-and-small-scale-mining-and-the-mineral-supply-chains-in-the-great-lakes-region

Geenen, S. (2012, 2012/09/01/). A dangerous bet: The challenges of formalizing artisanal mining in the Democratic Republic of Congo. *Resources Policy, 37*(3), 322-330. https://doi.org/https://doi.org/10.1016/j.resourpol.2012.02.004

Geenen, S. (2015). *African artisanal mining from the inside out: Access, norms and power in Congo's gold sector*. Routledge.

Geenen, S. (2017). Trump is right on Congo's minerals, but for all the wrong reasons. https://theconversation.com/trump-is-right-on-congos-minerals-but-for-all-the-wrong-reasons-73320

Geenen, S. (2018, 2018/05/01/). Underground dreams. Uncertainty, risk and anticipation in the gold production network. *Geoforum, 91*, 30-38. https://doi.org/https://doi.org/10.1016/j.geoforum.2018.02.019

Geenen, S., Bashizi, A., Lunanga, E., Kabunga, P. D., Mushagalusa, A. N., Kuliumbwa, E., & Mukulu, J. B. (2021). *Industrie minière et développement local en République Démocratique du Congo: focus sur l'emploi dans les sous-traitances*. IOB, Institute of Development Policy, University of Antwerp.

Geenen, S., & Custers, R. (2010). Tiraillements autour du secteur minier de l'Est de la RDC. In S. Vandeginste, F. Reyntjens, & S. Marysse (Eds.), *L'Afrique des Grands Lacs. Annuaire 2009-2010* (pp. 231-258). L'Harmattan.

Geenen, S., Kabilambali, G., Bashizi, F. M., & Vanlerberghe, E. (2022). Women who "age too fast": Female work, bodies and health in the gold mines of Eastern Democratic Republic of Congo. *The Extractive Industries and Society, 12*, 101138.

Geenen, S., Stoop, N., & Verpoorten, M. (2021). How much do artisanal miners earn? An inquiry among Congolese gold miners. *Resources Policy, 70*, 101893.

Georgiadou, Y., Lungo, J. H., & Richter, C. (2014, 2014/08/09). Citizen sensors or extreme publics? Transparency and accountability interventions on the mobile geoweb. *International Journal of Digital Earth, 7*(7), 516-533. https://doi.org/10.1080/17538947.2013.782073

GIZ. (n.d.). *Sustainable economic development in the mining sector*. https://www.giz.de/en/worldwide/19891.html

Glencore. (2020a). *Glencore Cobalt Industry Responsible Assessment Framework (CIRAF) report 2020*. https://www.glencore.com/dam/jcr:a905551e-540a-49d1-89ef-c9039bd4ecff/20210712-Cobalt-CIRAF-report.pdf

Glencore. (2020b). Our evolving approach to ASM: a plan for co-existence and transformation. https://www.glencore.com/media-and-insights/insights/our-evolving-approach-to-artisanal-small-scale-mining

Glencore. (2021). *EV supply chain majors pilot Re|Source, a blockchain solution for end-to-end cobalt traceability*. https://www.glencore.com/media-and-insights/news/ev-supply-chain-majors-pilot-relsource-a-blockchain-solution-for-end-to-end-cobalt-traceability

Global Reporting Initiative (GRI). (n.d.). *Standards*. https://www.globalreporting.org/standards/

Global Witness. (2020). *The Deal for Deziwa*. https://www.globalwitness.org/en/campaigns/oil-gas-and-mining/deal-deziwa/

Global Witness. (2022). *The ITSCI laundromat: How a due diligence scheme appears to launder conflict minerals*. https://www.globalwitness.org/en/campaigns/natural-resource-governance/itsci-laundromat/

Gobbers, E., Jaillon, A., & Kamundala, G. (2020). *Transparency and Formalization of Gold Supply Chains in Eastern DR Congo*. https://ipisresearch.be/wp-content/uploads/2020/05/2004-FEPRM-Gold-Progress-final-report.pdf

Goldfrank, B. (2012). The World Bank and the Globalization of Participatory Budgeting. *Journal of Public Deliberation, 8*(2). https://doi.org/https://doi.org/10.16997/jdd.143

Good Shepherd International Foundation. (n.d.). *Children not miners*. https://congo.gsif.it/#:~:text=The%20Centre%20works%20intensely%20to,social%20support%20to%20the%20families.

Google. (2022). *Supplier Responsibility Report 2022*. https://kstatic.googleusercontent.com/files/31525753ea384646ac6a6121659ad14673e84ccabb2dddffefc1e9186e196d8ac08ae9985d29ab3cdc2686f70b9f9b847fd4b79c32ac3edfaa5a93831b846936

Gouvernement de la RDC. (2018a). *Décret n.038/2003 du 26 mars 2003 portant reglement minier tel que modifié et complété par le décret n.18/024 du 8 juin 2018*. https://faolex.fao.org/docs/pdf/cng212783.pdf

Gouvernement de la RDC. (2018b). *Décret portant déclaration des substances minerales stratégiques en RDC*. https://congomines.org/reports/1609-decret-portant-declaration-des-substances-minerales-strategiques-en-rdc

Gouvernement de la RDC. (2018c). *Loi n°18/001 du 09 mars 2018 modifiant et complétant la Loi n° 007/2002 du 11 juillet 2002 portant Code minier*.

Gouvernement de la RDC. (2019). *Décret sur la création de l'ARECOMS*. https://congomines.org/reports/1816-decret-sur-la-creation-de-l-arecoms

Gray, C. (2023). More than Extraction: Rethinking Data's Colonial Political Economy. *International Political Sociology, 17*(2). https://doi.org/10.1093/ips/olad007

Grimstad Bang, T., & Johansson, A. (2019). *Responsible Sourcing via Blockchain in Mineral Supply Chains*. https://kth.diva-portal.org/smash/get/diva2:1328547/FULLTEXT02.pdf

Gustafsson, M.-T., Schilling-Vacaflor, A., & Lenschow, A. (2022). Foreign corporate accountability: The contested institutionalization of mandatory due diligence in France and Germany. *Regulation & Governance, n/a*(n/a). https://doi.org/https://doi.org/10.1111/rego.12498

Halleux, V. (2021). *New EU regulatory framework for batteries: Setting sustainability requirements*. https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/689337/EPRS_BRI(2021)689337_EN.pdf

Hilgert, F., & Spittaels, S. (2013). *Analysis of the interactive map of artisanal mining areas in Eastern DR Congo (2013)*. https://ipisresearch.be/publication/analysis-interactive-map-artisanal-mining-areas-eastern-dr-congo/

Hilson, G., Hilson, A., Siwale, A., & Maconachie, R. (2018, 2018/07/03). Female Faces in Informal 'Spaces': Women and Artisanal and Small-scale Mining in sub-Saharan Africa. *Africa Journal of Management, 4*(3), 306-346. https://doi.org/10.1080/23322373.2018.1516940

Huckabone, K. (2020). Certification, recertification, and surveillance audits — What's the difference? https://www.unitylabservices.com/en/support/standards-regulations/certification-recertification-surveillance-audits-what-s-difference.html

Human Rights Watch. (2018). *The Hidden Cost of Jewelry Human Rights in Supply Chains and the Responsibility of Jewelry Companies*. https://www.hrw.org/report/2018/02/08/hidden-cost-jewelry/human-rights-supply-chains-and-responsibility-jewelry

Iguma Wakenge, C., Bashwira Nyenyezi, M.-R., Bergh, S. I., & Cuvelier, J. (2021, 2021/06/01/). From 'conflict minerals' to peace? Reviewing mining reforms, gender, and state performance in eastern Democratic Republic of Congo. *The Extractive Industries and Society, 8*(2), 100894. https://doi.org/https://doi.org/10.1016/j.exis.2021.100894

IMPACT. (2019a). Meet REAFECOM: Congo's Women Artisanal Gold Miners Together in Solidarity. https://impacttransform.org/en/meet-reafecom-video/

IMPACT. (2019b). *New Project Kicks-Off to Support Women Peacebuilders in Congo's Artisanal Mining Communities* https://impacttransform.org/en/new-project-women-peacebuilders-congos-artisanal-mining/

IMPACT. (n.d.-a). Digging for Equality. https://impacttransform.org/en/work/project/digging-for-equality/

IMPACT. (n.d.-b). *Just Gold*. https://impacttransform.org/en/work/project/just-gold/

IMPACT. (n.d.-c). *Mapping Payments*. https://impacttransform.org/en/mapping-payments/

IMPACT, Good Shepherd International Foundation, & Bon Pasteur ASBL. (2022). *Her Security Women's Security as a Pathway to Improved Livelihoods in Democratic Republic of Congo's Cobalt Mining Communities*. https://impacttransform.org/wp-content/uploads/2022/08/Her-Security_EN-June-2022-v2.pdf

IMPACT, & RESOLVE. (2021). *Report from Stakeholder Consultations on the ASM Cobalt ESG Management Framework*. https://www.globalbattery.org/media/publications/report-from-stakeholder-consultations-on-the-asm-cobalt-esg-management-framework-english.pdf

Initiative for Responsible Mining Assurance. (n.d.). *Resources: The Standard for Responsible Mining*. https://responsiblemining.net/resources/#full-documentation-and-guidance

Initiative for Responsible Mining Assurance (IRMA). (n.d.-a). *About Us*. https://responsiblemining.net/about/about-us/

Initiative for Responsible Mining Assurance (IRMA). (n.d.-b). Standards that Dig Deeper & Assurance at Every Level. https://responsiblemining.net/

International Conference on the Great Lakes Region (ICGLR). (2010). *ICGLR Regional Certification Mechanism (RCM) — Certification Manual*. https://www.oecd.org/investment/mne/49111368.pdf

International Council for Mining and Metals (ICMM). (n.d.). *Our Work*. https://www.icmm.com/en-gb/our-work

International Finance Corporation (IFC). (n.d.). *Performance Standards*. https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards

International Labor Organization (ILO). (2021). *Mapping interventions addressing child labour and working conditions in artisanal mineral supply chains*. https://www.ilo.org/ipec/Informationresources/WCMS_782888/lang--en/index.htm

IPIS. (2019). *Regulating responsible sourcing of 3TG minerals* (IPIS Insights on Due Diligence on Mineral Sourcing, Issue. https://ipisresearch.be/wp-content/uploads/2020/01/201912_-insights-Due-Diligence.pdf

IPIS. (2020a). *IPIS Insights on Due Diligence in Mineral Sourcing – Regulating Responsible Sourcing of 3TG Minerals*. https://ipisresearch.be/publication/ipis-insights-due-diligence-mineral-sourcing-regulating-responsible-sourcing-3tg-minerals/

IPIS. (2020b). *IPIS' project Matokeo among the winners of the ASM Grand Challenge*. https://ipisresearch.be/fr/asm-grand-challenge-award-ceremony/

IPIS. (2021). *"The Blue Mine" as a new status for qualifying mine sites in DRC. The result of successful advocacy by the Madini Project*. https://ipisresearch.be/the-blue-mine-as-a-new-status-for-qualifying-mine-sites-in-drc-the-result-of-successful-advocacy-by-the-madini-project/

IPIS. (n.d.-a). *Artisanal Gold Monitoring Pilot in Mambasa*. https://ipisresearch.be/project/artisanal-gold-monitoring-pilot/

IPIS. (n.d.-b). *Kufatilia – Incident Reporting and Monitoring*. https://ipisresearch.be/project/kufatilia-incident-reporting-and-monitoring/

IPIS. (n.d.-c). Madini – Strengthening Regional Stability in the Great Lakes. https://ipisresearch.be/project/madini-strengthening-regional-stability-in-the-great-lakes/

IPIS. (n.d.-d). *Monitoring Gold in Eastern DRC: Ground-based Incident Reporting*. https://ipisresearch.be/fr/project/monitoring-gold-eastern-drc/

IPIS. (n.d.-e). *Responsible Gold in Beni*. https://ipisresearch.be/fr/project/responsible-gold-beni/

IPIS/ULULA. (2019). *Assessing the impact of due diligence programmes in Eastern DRC: A baseline study*. https://ipisresearch.be/publication/assessing-impact-due-diligence-programmes-eastern-drc-baseline-study/

ITSCI. (2016). ITSCI Booklet. https://www.itsci.org/wp-content/uploads/2017/01/iTSCi-Booklet-2016-.pdf

ITSCI. (2020). Partners. https://www.itsci.org/partners-2/

ITSCI. (2023). *Second Independent Assessment finds ITSCI Fully Aligned with the OECD Guidance*. https://www.itsci.org/2023/06/08/second-independent-assessment-finds-itsci-fully-aligned-with-the-oecd-guidance/

ITSCI. (n.d.-a). Join the Successful Industry Programme. https://www.itsci.org/join-our-members/

ITSCI. (n.d.-b). *What is ITSCI*. https://www.itsci.org/purpose/

Jaillon, A. (2019). *ASM Incident Tracker*. IPIS. https://ipisresearch.be/publication/asm-incident-tracker/

Jaillon, A. (2020). *IPIS Briefing October 2020 – Matokeo*. https://ipisresearch.be/weekly-briefing/ipis-briefing-october-2020-matokeo/

Jarvie-Eggart, M. E. (2015). Development and Progress of the Mining Association of Canada's Towards Sustainable Mining Program. In K. D. Thomas (Ed.), *Handbook of Research on Sustainable Development and Economics*. https://www.igi-global.com/chapter/development-and-progress-of-the-mining-association-of-canadas-towards-sustainable-mining-program/130934

Jeffrey, J. C. (2012). Tungsten Is Forever: Conflict Minerals, Dodd-Frank, and the Need for European Response. *New England Journal of International and Comparative Law, 18*(2), 503-514.

Johansson de Silva, S., Strauss, T., & Morisho, N. (2019). *The Mutoshi Pilot Project: Local economic impact of a project aimed at formalizing artisanal and small-scale mining.* https://www.trafigura.com/media/2433/2019_trafigura_the_mutoshi-pilot_project.pdf

Jolly, J. (2023). Concerns raised over mining companies' role in battery passport scheme. *The Guardian*. https://www.theguardian.com/business/2023/may/08/concerns-raised-over-mining-companies-role-in-battery-passport-scheme?CMP=share_btn_tw

Just Results. (2020). *Mineral supply chains mapping and labour market assessment*. https://delvedatabase.org/uploads/resources/DRC_Mineral_Supply_Chain_Mapping_and_LMA_May_2020.pdf

Justice Pour Tous. (2021). *LES COULISSES DE L'EXPLOITATION MINIERE ARTISANALE AU SUD-KIVU EN RD CONGO*. https://congomines.org/reports/2309-les-coulisses-de-l-exploitation-miniere-artisanale-au-sud-kivu-en-rdc

Katho, O., Lebert, J., Lonema, J. P., Singo, P., & Burg, G. v. d. (2021). *The Just Gold Project: Lessons for the Future of Artisanal Gold in Democratic Republic of Congo*. https://impacttransform.org/wp-content/uploads/2021/03/IMPACT_Just-Gold-Lessons_March-2021_EN-web.pdf

Katz-Lavigne, S. (2019, 2019/04/01/). Artisanal copper mining and conflict at the intersection of property rights and corporate strategies in the Democratic Republic of Congo. *The Extractive Industries and Society, 6*(2), 399-406. https://doi.org/https://doi.org/10.1016/j.exis.2018.12.001

Katz-Lavigne, S. (2020, 2020/03/01/). Distributional impact of corporate extraction and (un)authorised clandestine mining at and around large-scale copper- and cobalt-mining sites in DR Congo. *Resources Policy, 65*, 101584. https://doi.org/https://doi.org/10.1016/j.resourpol.2020.101584

Kilosho Buraye, J. (2018). *Industrialisation et traçabilité minières au Sud-Kivu : Quel avenir pour les exploitants miniers artisanaux?* https://delvedatabase.org/resources/industrialisation-et-tra%C3%A7abilit%C3%A9-mini%C3%A8res-au-sud-kivu-quel-avenir-pour-les-exploitants-miniers-artisanaux

Know the Chain. (2020). *Information and Communications Technology Benchmark Findings Report*. https://knowthechain.org/wp-content/uploads/2020-KTC-ICT-Benchmark-Report-1.pdf

Koch, D.-J., & Burlyuk, O. (2020, 2020/10/02). Bounded policy learning? EU efforts to anticipate unintended consequences in conflict minerals legislation. *Journal of European Public Policy, 27*(10), 1441-1462. https://doi.org/10.1080/13501763.2019.1675744

Koenig-Archibugi, M., & Macdonald, K. (2013). Accountability-by-Proxy in Transnational Non-State Governance. *Governance, 26*(3), 499-522. https://doi.org/https://doi.org/10.1111/j.1468-0491.2012.01609.x

Kramarz, T., & Park, S. (2016). Accountability in Global Environmental Governance: A Meaningful Tool for Action? *Global Environmental Politics, 16*(2), 1-21. https://doi.org/10.1162/GLEP_a_00349

La conférence Internationale sur la Région des Grands Lacs - CIRGL. (n.d.-a). Forum des Femmes. https://icglr.org/fr/forum-des-femmes%ef%bf%bc/

La conférence Internationale sur la Région des Grands Lacs - CIRGL. (n.d.-b). Forum des Jeunes. https://icglr.org/fr/forum-des-jeunes%ef%bf%bc/

La conférence Internationale sur la Région des Grands Lacs - CIRGL. (n.d.). *Forum De La Société Civile*. https://icglr.org/fr/forum-de-la-societe-civile/

Lahiri-Dutt, K. (2011). *Gendering the Field: Towards Sustainable Livelihoods for Mining Communities*. ANU Press.

Landau, I. (2019). Human rights due diligence and the risk of cosmetic compliance. *Melb. J. Int'l L., 20*, 221.

Laudati, A. (2013). Beyond minerals: broadening 'economies of violence'in eastern Democratic Republic of Congo. *Review of African Political Economy, 40*(135), 32-50.

Levin, E., Cook, R., Chishugi, A., Jorns, A., & Mulumeoderhwa, P. (2015). *Comparative Study of Certification and Traceability Systems in the Democratic Republic of the Congo*. https://www.levinsources.com/assets/pages/report-promines-comparative-study-certification-traceability-systems-drc-congo.pdf

Levin Sources. (2021a). *Madini Project: Advocating for an improved enabling environment for the production, trade and export of OECD Due Diligence Guidance (DDG)-conformant minerals from eastern DRC*. https://ipisresearch.be/wp-content/uploads/2021/11/202111_Madini_Final-report-OECD-conformant-supply-ENG.pdf

Levin Sources. (2021b). *Opportunities for technology use in responsible minerals production and sourcing in the DRC*. https://www.levinsources.com/knowledge-centre/publications/technology-responsible-minerals-production-sourcing-drc

Levin Sources. (n.d.-a). *Developing ERG's Clean Cobalt Framework*. https://www.levinsources.com/what-we-do/case-studies/developping-clean-cobalt-framework-erg

Levin Sources. (n.d.-b). *MARKET ANALYSIS: ARTISANAL AND SMALL-SCALE MINING (ASM) GOLD FROM EASTERN DRC*.

Levin Sources. (n.d.-c). Revision of the Regional Certification Mechanism of the International Conference of the Great Lakes Region. https://www.levinsources.com/what-we-do/case-studies/revision-rcm-icglr

London Bullion Market Association (LBMA). (2021). *Responsible Sourcing Report 2021*. https://cdn.lbma.org.uk/downloads/responsible-sourcing/Responsible-Sourcing-Report_LBMA_2021_Final.pdf

London Bullion Market Association (LBMA). (2022). *Sustainability and Responsible Sourcing Report 2022*. https://cdn.lbma.org.uk/downloads/Publications/2022/LBMA_Sustainability-and-Responsible-Sourcing-Report_2022_Final.pdf

Macdonald, C. (2018). The Role of Participation in Sustainable Community Development Programmes in the Extractive Industries. In T. Addison & A. Roe (Eds.), *Extractive Industries: The Management of Resources as a Driver of Sustainable Development* (pp. 591–610). https://doi.org/https://academic.oup.com/book/27405/chapter/197238559

MacInnes, A., Colchester, M., & Whitmore, A. (2017, 2017/07/01/). Free, prior and informed consent: how to rectify the devastating consequences of harmful mining for indigenous peoples'. *Perspectives in Ecology and Conservation, 15*(3), 152-160. https://doi.org/https://doi.org/10.1016/j.pecon.2017.05.007

Mahamba, F., & Lewis, B. (2019). Congo miner SMB leaves ITSCI responsible-sourcing scheme over cost. *Reuters*. https://www.reuters.com/article/us-itsci-congo-idUSKCN1P20OV

Mancini, L., Eslava, N., Traverso, M., & Mathieux, F. (2020). *Responsible and sustainable sourcing of battery raw materials*. https://publications.jrc.ec.europa.eu/repository/handle/JRC120422

Mancini, L., Eslava, N. A., Traverso, M., & Mathieux, F. (2021, 2021/06/01/). Assessing impacts of responsible sourcing initiatives for cobalt: Insights from a case study. *Resources Policy, 71*, 102015. https://doi.org/https://doi.org/10.1016/j.resourpol.2021.102015

Manhart, A., & Schleicher, T. (2013). *Conflict minerals – An evaluation of the Dodd-Frank Act and other resource-related measures* https://www.oeko.de/oekodoc/1809/2013-483-en.pdf

Manley, D., Heller, P. R. P., & Davis, W. (2022). No Time to Waste: Governing Cobalt Amid the Energy Transition.

Matthysen, K., Spittaels, S., & Schouten, P. (2019). *Mapping artisanal mining areas and mineral supply chains in Eastern DR Congo Impact of armed interference & responsible sourcing*. https://ipisresearch.be/wp-content/uploads/2019/04/1904-IOM-mapping-eastern-DRC_versie03.pdf

McKerracher, C., & Wagner, S. (2021). At Least Two-Thirds of Global Car Sales Will Be Electric by 2040. https://www.bloomberg.com/news/articles/2021-08-09/at-least-two-thirds-of-global-car-sales-will-be-electric-by-2040?leadSource=uverify%20wall

McQuilken, J., Shirgholami, Z., & McFarlane, D. (2022). Understanding and addressing 'modern slavery' in DRC-UK cobalt supply chains. In *Routledge Handbook of the Extractive Industries and Sustainable Development* (pp. 514-541). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003001317-31/understanding-addressing-modern-slavery-drc-uk-cobalt-supply-chains-james-mcquilken-zahra-shirgholami-dylan-mcfarlane?context=ubx&refId=046f1dd0-f30e-498f-a7d8-ad3c674928a5

Meesters, M., Wostyn, P., van Leeuwen, J., Behagel, J. H., & Turnhout, E. (2021, 2021/04/01/). The Social Licence to Operate and the legitimacy of resource extraction. *Current Opinion in Environmental Sustainability, 49*, 7-11. https://doi.org/https://doi.org/10.1016/j.cosust.2020.11.002

Mercedes-Benz Group AG. (2019). *Education to counter child labor – Daimler supports a social project in the Democratic Republic of the Congo with over one million euros*. https://group-media.mercedes-benz.com/marsMediaSite/en/instance/ko/Education-to-counter-child-labor--Daimler-supports-a-social-project-in-the-Democratic-Republic-of-the-Congo-with-over-one-million-euros.xhtml?oid=42790538

Ministère des Mines. (2010a). *Arrêté ministériel n°0705/CAB.MIN/MINES/01/2010 du 20 septembre 2010 portant suspension des activités minières dans les provinces du Maniema, Nord-Kivu et Sud-Kivu.*

Ministère des Mines. (2010b). *Arrêté ministériel n°0706/CAB.MIN/MINES/01/2010 du 20 septembre 2010 portant mesures urgentes d'encadrement de la décision de suspension des activités minières dans les provinces du Maniema, Nord-Kivu et Sud-Kivu.*

Ministère des Mines. (2011). *Chronogramme des mesures d'exécution de la decision de levee de suspension des activités miières dans les trois provinces, 2011.*

Ministère des Mines. (2012). *Arrêté ministériel n.0058/cab.mines/mines/01/2012 du 29 février 2012 fixant les procédures de qualification et de validation des sites miniers des filières aurifère et stannifère dans les provinces du Katanga, du Maniema, du Nord Kivu, du Sud Kivu et de la*

Province Orientale. https://mines-rdc.cd/fr/wp-content/uploads/simple-file-list/arret%C3%A9s/2012/A0058_bis_2012.pdf

Ministère des Mines. (2019). *Certification Handbook "Certified Trading Chains" (CTC) for gold, copper-cobalt, tin, tantalum, tungsten and coloured gemstones from artisanal and small scale mining operations in the Democratic Republic of the Congo*. https://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Downloads/kongo_handbook_Certified%20_Trading_Chains_en.pdf;jsessionid=F9F740B6FD3546A9A92AA288C5C1B70B.internet991?__blob=publicationFile&v=4

Ministère des Mines, & Ministère des Finances. (2009). *Manuel des procédures de traçabilité des produits miniers, de l'extraction à l'exportation.*

Molina, E., Carella, L., Pacheco, A., Cruces, G., & Gasparini, L. (2016). Community monitoring interventions to curb corruption and increase access and quality of service delivery in low- and middle-income countries: a systematic review. *Campbell Systematic Reviews, 12*(1), 1-204. https://doi.org/https://doi.org/10.4073/csr.2016.8

Morgera, E. (2007). Significant Trends in Corporate Environmental Accountability: The New Performance Standards of the International Finance Corporation. *Colo. J. Int'l Envtl. L. & Pol'y, 18*, 151.

MSI Integrity. (2020). *Not Fit-for-Purpose: The Grand Experiment of Multi-Stakeholder Initiatives in Corporate Accountability, Human Rights and Global Governance*.

MSI Integrity. (n.d.). *What Are MSIs?* https://www.msi-integrity.org/what-are-msis/

Mthembu-Salter, G., & Salter, D. T. (2022). *Towards an LBMA Good Delivery List for Artisanal and Small-Scale Responsibly Mined Gold*. https://www.lbma.org.uk/publications/towards-an-lbma-good-delivery-list-for-artisanal-and-small-scale-responsibly-mined-gold

Muhamad Khair, N. K., Lee, K. E., & Mokhtar, M. (2021, 2021/07/01/). Community-based monitoring for environmental sustainability: A review of characteristics and the synthesis of criteria. *Journal of Environmental Management, 289*, 112491. https://doi.org/https://doi.org/10.1016/j.jenvman.2021.112491

Muheki, S., & Geenen, S. (2018). Women in (and out of) artisanal mining: apposing policy and women's lived experiences in Lujinji B and Wakayiba mines, Mubende, Uganda.

Murrey, A., & Jackson, N. A. (2020). A decolonial critique of the racialized "localwashing" of extraction in Central Africa. *Annals of the American Association of Geographers, 110*(3), 917-940.

Musamba, J., & Vogel, C. (2021). The Problem with "Conflict Minerals". *Dissent Magazine*. https://www.dissentmagazine.org/online_articles/the-problem-with-conflict-minerals

Musavengane, R. (2019, 2019/03/01/). Using the systemic-resilience thinking approach to enhance participatory collaborative management of natural resources in tribal communities: Toward inclusive land reform-led outdoor tourism. *Journal of Outdoor Recreation and Tourism, 25*, 45-56. https://doi.org/https://doi.org/10.1016/j.jort.2018.12.002

Mwarabu, A. (2020). Lualaba : l'inauguration du Centre de négoce de Musompo en août 2020 va mettre fin aux comptoirs clandestins des minerais (Richard Muyej). *DeskEco*. https://deskeco.com/2020/07/13/lualaba-linauguration-du-centre-de-negoce-de-musompo-en-aout-2020-va-mettre-fin-aux-comptoirs

Ndatabaye, E. M., Buhendwa, A. M., Kusimwa, G. B., & Nyenyezi, M.-R. B. (2021). Institutions des réformes minières et perceptions des exploitants miniers artisanaux du coltan à Numbi (Sud-Kivu, Est de la RDC). In *Conjonctures de l'Afrique centrale 2021*. https://www.eca-creac.eu/sites/default/files/pictures/institutions_des_reformes_minieres_et_perceptions_des_exploitants_miniers_2.pdf

Nkumba-Umpula, E., Buxton, A., & Schwartz, B. (2021). *Islands of responsibility? Corporate sourcing of artisanal cobalt in the Democratic Republic of Congo*. https://pubs.iied.org/20436iied

Nyembo, J., Nzumbu, J., Mutombo Lenge, A., Jensen, J., & Carter, K. (2020). *Mining Alternatives Project*. https://www.millersocent.org/mining-alternatives-project/

OECD. (2016a). *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition*.

OECD. (2016b). *Public-Private Alliance for Responsible Minerals Trade (PPA)*. https://www.oecd.org/dac/peer-reviews/Public-Private-Alliance-for-Responsible-Minerals-Trade.pdf

OECD. (2018). *OECD Due Diligence Guidance for Responsible Business Conduct*. https://www.oecd.org/investment/due-diligence-guidance-for-responsible-business-conduct.htm

OECD. (2019). *Interconnected supply chains: a comprehensive look at due diligence challenges and opportunities sourcing cobalt and copper from the Democratic Republic of the Congo*. https://mneguidelines.oecd.org/interconnected-supply-chains-a-comprehensive-look-at-due-diligence-challenges-and-opportunities-sourcing-cobalt-and-copper-from-the-drc.htm

OECD. (2022). *Monitoring corporate disclosure - Assessing company reporting on mineral supply chain due diligence*. https://mneguidelines.oecd.org/monitoringcorporatedisclosure-assessingcompanyreportingonmineralsupplychainduediligence.htm

OECD, & Kumi Consulting. (2018). Alignment Assessment of Industry Programmes with the OECD Minerals Guidance. http://mneguidelines.oecd.org/Alignment-assessment-of-industry-programmes-with-the-OECD-minerals-guidance.pdf

Organisation for Economic Co-operation and Development (OECD). (2022). *2022 Forum on Responsible Mineral Supply Chains*. https://www.oecd.org/corporate/mne/forum-responsible-mineral-supply-chains.htm

Owen, W. (2022). *Sud South and Minespider to implement traceability solution for copper and cobalt*. Retrieved 23/01/2023 from https://www.globalminingreview.com/mining/29072022/sud-south-and-minespider-to-implement-traceability-solution-for-copper-and-cobalt/

Oxfam International. (2010). *Review of IFC Performance Standards and Sustainability Policy*. https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620769/bn-ifcpssp-review-200510-en.pdf;jsessionid=B885FB8013A9DD1BCF918BAB882822EE?sequence=1

Pact. (2018). *Linking Vocational Education to the Economy in the DRC's Copperbelt*. https://www.pactworld.org/sites/default/files/DRC_VocStudy_A4_ENG_F4_view.pdf

Pact. (2020). *Pact's youth apprenticeship program in Kolwezi, DRC*. https://www.pactworld.org/library/pacts-youth-apprenticeship-program-kolwezi-drc

Pact. (2022). *Through apprenticeships, DRC youth develop new trades and leave the dangers of mining behind*. https://www.pactworld.org/blog/through-apprenticeships-drc-youth-develop-new-trades-and-leave-dangers-mining-behind

Pact. (n.d.-a). *Children Out of Mining*. https://www.pactworld.org/video/children-out-mining

Pact. (n.d.-b). *Pact Youth Apprenticeship Program*. https://www.pactworld.org/Pact%26%23039%3Bs%20youth%20apprenticeship%20program%20in%20Kolwezi%2C%20DRC

Pact. (n.d.-c). *Youth Apprenticeship Program*. https://www.pactworld.org/projects/youth-apprenticeship-program

Pact, & Microsoft. (2017). *Pact and Microsoft expand fight against child labor in Congo mining*. https://news.microsoft.com/2017/08/30/pact-and-microsoft-expand-fight-against-child-labor-in-congo-mining/#:~:text=Pact%20and%20Microsoft%20have%20been,to%20child%20labor%20in%20mining.

Park, H. (2023). Global Norm-Maker as China's New Brand? An Analysis of the Responsible Cobalt Initiative. *The Chinese Journal of International Politics*. https://doi.org/10.1093/cjip/poad002

Parker, D. P., Foltz, J. D., & Elsea, D. (2016). Unintended Consequences of Sanctions for Human Rights: Conflict Minerals and Infant Mortality. *The Journal of Law and Economics, 59*(4), 731-774. https://doi.org/10.1086/691793

Parker, D. P., & Vadheim, B. (2017). Resource Cursed or Policy Cursed? US Regulation of Conflict Minerals and Violence in the Congo. *Journal of the Association of Environmental and Resource Economists, 4*(1), 1-49. https://doi.org/10.1086/689865

Partzsch, L., Postma, H., & Geenen, S. (2019). *'Ethical' minerals and timber certification: Can new technologies improve accountability towards affected communities?* European Conference of African Studies, Edinburgh.

Partzsch, L., & Vlaskamp, M. C. (2016, 2016/11/01/). Mandatory due diligence for 'conflict minerals' and illegally logged timber: Emergence and cascade of a new norm on foreign accountability. *The Extractive Industries and Society, 3*(4), 978-986. https://doi.org/https://doi.org/10.1016/j.exis.2016.07.003

Pattisson, P. (2021). 'Like slave and master': DRC miners toil for 30p an hour to fuel electric cars. *The Guardian*. https://www.theguardian.com/global-development/2021/nov/08/cobalt-drc-miners-toil-for-30p-an-hour-to-fuel-electric-cars

Pérez Piñán, A. V., Friedland, H., Sayers, J., & Murphy, M. (2022, 2022/01/02). Reclaiming Indigenous Economic Development Through Participatory Action Research. *Journal of Human Development and Capabilities, 23*(1), 30-49. https://doi.org/10.1080/19452829.2021.2009449

Perreault, T. (2015). Performing participation: Mining, power, and the limits of public consultation in Bolivia. *The Journal of Latin American and Caribbean Anthropology, 20*(3), 433-451.

Petavratzi, E., Gunn, G., & Kresse, C. (2019). *Commodity review: Cobalt.*

Ponte, S., Noe, C., & Brockington, D. (2022). New Partnerships for Sustainability. In S. Ponte, C. Noe, & D. Brockington (Eds.), *Contested Sustainability: The Political Ecology of Conservation and Development in Tanzania*. Boydell & Brewer.

Postma, H., & Geenen, S. (2020). *Flagged and tagged by ITSCI: The practice of due diligence in non-state supply chain regulation in Rwanda* (Analysis and Policy Brief 40). https://www.uantwerpen.be/en/research-groups/iob/publications/analyses-and-policy-briefs/apb-2020/apb-40/

Postma, H., Geenen, S., & Partzsch, L. (2021, 2021/09/01/). Digging for due diligence: The case of non-state mineral supply chain regulation by ITSCI in Rwanda. *The Extractive Industries and Society, 8*(3), 100920. https://doi.org/https://doi.org/10.1016/j.exis.2021.100920

Pöyhönen, P., Bjurling, K. A., & Cuvelier, J. (2010). *Voices from the inside: Local views on mining reform in Eastern DR Congo*. https://www.swedwatch.org/wp-content/uploads/2016/12/swedwatch_make_it_fair_-_voices_from_the_inside.pdf

Radio Okapi. (2020). *Sud-Kivu : l'ONG Justice pour Tous lance une campagne de vulgarisation du code minier révisé*. https://www.radiookapi.net/2021/02/10/actualite/economie/sud-kivu-long-justice-pour-tous-lance-une-campagne-de-vulgarisation-du

Radley, B., & Chase, S. (2016). *We Will Win Peace* https://researchportal.bath.ac.uk/en/publications/we-will-win-peace

Radley, B., & Rothenberg, D. (2014). The Lived Experience of Human Rights and Labour Violations in Select Artisanal Mining Sites in North and South Kivu of the Eastern DRC. *ISS Staff Group 0*.

Radley, B., & Vogel, C. (2015, 2015/08/01/). Fighting windmills in Eastern Congo? The ambiguous impact of the 'conflict minerals' movement. *The Extractive Industries and Society, 2*(3), 406-410. https://doi.org/https://doi.org/10.1016/j.exis.2015.05.005

RAID. (2009). *Chinese mining operations in Katanga, DRC*. https://www.raid-uk.org/sites/default/files/drc-china-report.pdf

RAID. (2021). Exploitation of workers in DR Congo taints electric vehicles. https://www.raid-uk.org/blog/cobalt-workers-exploitation

RAID, & CAJJ. (2021). THE ROAD TO RUIN? Electric vehicles and workers' rights abuses at DR Congo's industrial cobalt mines. https://www.raid-uk.org/sites/default/files/report_road_to_ruin_evs_cobalt_workers_nov_2021.pdf

RCS Global Group. (2017). *The battery revolution: balancing progress with supply chain risks*.

RCS Global Group. (2021a). *OECD DUE DILIGENCE GUIDANCE ANNEX II RISKS 3T 2021 OECD Step 5 Report Date range: November 2020 – October 2021*. https://www.rcsglobal.com/pdfs/Better_Mining_3T_OECD_Step_5_2021.pdf

RCS Global Group. (2021b). *RCS Global and Responsible Minerals Initiative Expand Better Mining Programme*. https://www.rcsglobal.com/rcs-global-and-responsible-minerals-initiative-expand-better-mining-programme/

RCS Global Group. (2022). *BETTER MINING IMPACT REPORT 2022*. https://www.rcsglobal.com/pdfs/Better_Mining_Impact_Report.pdf

RCS Global Group. (n.d.-a). *BETTER MINING*. https://www.rcsglobal.com/bettermining/

RCS Global Group. (n.d.-b). *Measure and improve suppliers' ESG performance*. https://www.rcsglobal.com/vine-platform/

RCS Global Group. (n.d.-c). *The mineral agnostic, digitally enabled, artisanal and small-scale mining (ASM) upstream assurance and improvement program, which addresses ESG risk areas to*

serve mining communities and the minerals value chain, worldwide. https://www.rcsglobal.com/bettermining/#:~:text=Better%20Mining%20%2D%20RCS%20Global%20Group&text=The%20mineral%20agnostic%2C%20digitally%20enabled,the%20minerals%20value%20chain%2C%20worldwide.

RDC : Willy Kitobo lance une campagne médiatique de vulgarisation du Code minier révisé. (2020). *Zoom Eco*. https://zoom-eco.net/a-la-une/rdc-willy-kitobo-lance-une-campagne-mediatique-de-vulgarisation-du-code-minier-revise/

RDC Coordination des Plaidoyers de la Société Civile pour la Gouvernance des Ressources Naturelles, & SARWATCH. (2018). *Guide de vulgarisation de la loi n°18/001 du 09 mars 2018 modifiant et complétant la loi n°007/2002 du 11 juillet 2002 portant code minier*. https://congomines.org/system/attachments/assets/000/001/572/original/GUIDE_DE_VULGARISATION_DE_LA_LOI_VERSION_FINAL_OK.pdf?1559131247

Reinert, K. A., Reinert, O. T., & Debebe, G. (2016). The new OECD Guidelines for Multinational Enterprises: better but not enough. *Development in practice, 26*(6), 816-823.

RESOLVE. (2021). *Supporting the Artisanal Cobalt Sector and Responsible, Inclusive Supply Chains*. https://www.resolve.ngo/blog/Supporting-the-Artisanal-Cobalt-Sector-and-Responsible-Inclusive-Supply-Chains.htm

RESOLVE. (n.d.-a). *Conflict Free Tin Initiative (CFTI)*. https://www.resolve.ngo/site-cfti/default.htm#:~:text=The%20CFTI%20aimed%20to%20show,Risk%20Areas)%20through%20the%20use

RESOLVE. (n.d.-b). *Joining the PPA*. https://www.resolve.ngo/site-ppa/join.htm

RESOLVE. (n.d.-c). *Public-Private Alliance for Responsible Minerals Trade*. https://www.resolve.ngo/site-ppa/whoweare.htm

ReSource. (2023). *ReSource and Global Battery Alliance profile first successful electric vehicle battery passport pilots*. Retrieved 23/01/2023 from https://re-source.tech/resource-first-battery-passport-pilots/

Resource Matters. (2019). *See No Evil, Speak No Evil – Poorly Managed Corruption Risks in the Cobalt Supply Chain*. https://resourcematters.org/wp-content/uploads/2019/04/ResourceMatters-SeeNoEvil-CobaltCorruptionRisks-Apr-2019.pdf

Responsible Cobalt Initiative (RCI), & Responsible Minerals Initiative (RMI). (2021). *Cobalt Refiner Supply Chain Due Diligence Standard Version 2.0*.

Responsible Cobalt Initiative (RCI), & The Global Battery Alliance's Cobalt Action Partnership (GBA CAP). (2021). Artisanal and Small-Scale Mining (ASM) Cobalt Framework Consultation.

Responsible Jewellery Council (RJC). (2019). *Code of Practices Standard*. https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf?_ga=2.136896309.441808460.1675524310-201966595.1675524310

Responsible Minerals Initiative (RMI). (2021). *Responsible Minerals Initiative Releases ESG Standard for Mineral Supply Chains*. https://www.responsibleminerals initiative.org/news/responsible-minerals-initiative-releases-esg-standard-for-mineral-supply-chains/#:~:text=%E2%80%9CThe%20RMI's%20ESG%20Standard%20offers,at%20the%20Responsible%20Business%20Alliance.

Responsible Minerals Initiative (RMI). (2023). *ITSCI and the RMI Reach a Shared Understanding Regarding RMI Recognition* https://www.responsibleminerals initiative.org/news/itsci-and-the-rmi-reach-a-shared-understanding-regarding-rmi-recognition/

Responsible Minerals Initiative (RMI). (n.d.-a). *RMAP Cross-Recognition*. https://www.responsibleminerals initiative.org/minerals-due-diligence-container/recognized-standards-or-programs/audit-cross-recognition/

Responsible Minerals Initiative (RMI). (n.d.-b). *RMAP Documents & Tools*. https://www.responsibleminerals initiative.org/rmap/documents-and-tools/?

Responsible Minerals Initiative (RMI), & (RCI), R. C. I. (2021). *RMI and RCI Publish Revised Cobalt Refiner Supply Chain Due Diligence Standard* https://www.responsibleminerals initiative.org/news/rmi-and-rci-publish-revised-cobalt-refiner-supply-chain-due-diligence-standard/

Responsible Sourcing Network. (n.d.). About Us. https://www.sourcingnetwork.org/aboutus

Reuters Staff. (2021). Congo launches state artisanal cobalt buyer. *Reuters*. https://www.reuters.com/article/congo-mining-cobalt-idAFL8N2LT2V0

Ruggie, J. G., & Nelson, T. (2015). Human rights and the OECD Guidelines for Multinational Enterprises: Normative innovations and implementations challenges. *Brown J. World Aff., 22*, 99.

Saegert, J., & Grossman, G. (2018). Human Rights Due Diligence in Mineral Supply Chains: International Developments and Chinese Efforts. *Stiftung Asienhaus*. https://doi.org/10.11588/xarep.00004158

Saguin, K. (2018, 2018/12/01/). Why the poor do not benefit from community-driven development: Lessons from participatory budgeting. *World Development, 112*, 220-232. https://doi.org/https://doi.org/10.1016/j.worlddev.2018.08.009

Sarfaty, G. A. (2015). Shining Light on Global Supply Chains. *Harvard International Law Journal, 56*(2). https://harvardilj.org/wp-content/uploads/sites/15/562Sarfaty.pdf

Schedler, A. (1999). The Self-restraining State: Power and Accountability in New Democracies. In A. Schedler, L. J. Diamond, & M. F. Plattner (Eds.), *Conceptualizing Accountability* (pp. 13–28). Lynne Riener Publishers.

Scheer, C. (2022). *"Gold is gold": Understanding the role of European actors along the supply chain of Colombian gold* https://lup.lub.lu.se/student-papers/search/publication/9083892

Schiavi, P., & Solomon, F. (2006). Voluntary Initiatives in the Mining Industry: Do They Work? *Greener Management International*(53), 27-41. http://www.jstor.org/stable/greemanainte.53.27

Schouten, P., & Miklian, J. (2020). The business–peace nexus:'business for peace'and the reconfiguration of the public/private divide in global governance. *Journal of International Relations and Development, 23*(2), 414-435.

Schütte, P. (2019, 2019/08/01/). International mineral trade on the background of due diligence regulation: A case study of tantalum and tin supply chains from East and Central Africa. *Resources Policy, 62*, 674-689. https://doi.org/https://doi.org/10.1016/j.resourpol.2018.11.017

Sofala Partners, & BetterChain. (2019). *The barriers to financial access for the responsible minerals trade in the GLR*. https://www.resolve.ngo/docs/ppa_-_barriers_and_opportunities_for_artisanal_access_to_finance_-_april_2019_-_final.pdf

Sowman, M., & Sunde, J. (2021, 2021/10/01/). A just transition? Navigating the process of policy implementation in small-scale fisheries in South Africa. *Marine Policy, 132*, 104683. https://doi.org/https://doi.org/10.1016/j.marpol.2021.104683

Stoop, N., Verpoorten, M., & van der Windt, P. (2018). More legislation, more violence? The impact of Dodd-Frank in the DRC. *PLOS ONE, 13*(8), e0201783. https://doi.org/10.1371/journal.pone.0201783

Swedwatch. (2007). Powering the Mobile World. https://swedwatch.org/publication/powering-the-mobile-world/

Sydow, J., & Reichwein, A. (2018). *Governance of Mineral Supply Chains of Electronic Devices*. https://www.germanwatch.org/en/15418

Taka, M. (2014). *A Critical Analysis of Human Rights Due Diligence Processes in Mineral Supply Chains: Conflict Minerals in the DRC*. https://saiia.org.za/research/a-critical-analysis-of-human-rights-due-diligence-processes-in-mineral-supply-chains-conflict-minerals-in-the-drc/

Tesla. (2021). *Tesla Conflict Minerals Report*. https://www.tesla.com/sites/default/files/about/legal/2021-conflict-minerals-report.pdf?redirect=no

Tetra Tech. (2018). CAPACITY BUILDING FOR A RESPONSIBLE MINERALS TRADE (CBRMT) QUARTERLY REPORT: JULY-SEPTEMBER 2018 AND FY 2018 ANNUAL REPORT. https://pdf.usaid.gov/pdf_docs/PA00TDHJ.pdf

The Alliance for Responsible Mining (ARM). (2020). *CRAFT 2.0*. https://www.craftmines.org/wp-content/uploads/2021/03/CRAFT_2.0_Completo_Ingles_VersionFinal-1.pdf

The China Chamber of Commerce of Metals, M. a. C. I. a. E. C. (2018). *Guidelines for Social Responsibility in Outbound Mining Investments (GSRM)*. http://images.mofcom.gov.cn/csr2/201812/20181224151850626.pdf

The Cobalt Action Partnership. (2021). *Report from Stakeholder Consultations on the Artisanal and Small-Scale Mining Cobalt ESG Management Framework*. https://www.globalbattery.org/media/publications/report-from-stakeholder-consultations-on-the-asm-cobalt-esg-management-framework-english.pdf

The Cobalt Action Partnership, Responsible Cobalt Initiative (RCI), & Alliance, F. C. (2021). *The ASM Cobalt Framework Vision*. https://www.faircobaltalliance.org/wp-content/uploads/2021/09/ASM-Cobalt-Framework-Vision-and-Approach_June2021.pdf

The Critical Minerals Association ESG Working Group. (2021). *Enabling UK's Green Industrial Revolution: A Blueprint for Responsible Sourcing of Critical Minerals*. https://www.criticalmineral.org/_files/ugd/5caeff_44480c03cc834f7f8613b985170f8336.pdf

The European Partnership for Responsible Minerals. (2020). Project deep dive Women's Empowerment in Credit & Savings. https://europeanpartnership-responsibleminerals.eu/blog/view/86c8ae99-5e71-47ad-a62a-0f3602339785/project-deep-dive-women%E2%80%99s-empowerment-in-credit-savings

The European Partnership for Responsible Minerals (EPRM). (n.d.-a). *About EPRM*. https://europeanpartnership-responsibleminerals.eu/cms/view/5458d1cb-b0f7-4aea-85db-2eb18cc6dab9/about-eprm

The European Partnership for Responsible Minerals (EPRM). (n.d.-b). *CADD: Consolidated Autonomous Due Diligence*. https://europeanpartnership-responsibleminerals.eu/cms/view/22052670-7f31-4c59-ba11-41c84bf469ed/eprm-projects/ea35e520-74c2-47c0-9c9b-526f5a444784

The European Partnership for Responsible Minerals (EPRM). (n.d.-c). EPRM completed projects. https://europeanpartnership-responsibleminerals.eu/cms/view/177552c8-fa35-4b70-91ee-e42fee0bd9c2/eprm-completed-projects

The European Partnership for Responsible Minerals (EPRM). (n.d.-d). *MAX-D – Maximizing Due Diligence in Minerals Supply Chains*. https://europeanpartnership-responsibleminerals.eu/cms/view/fcc4d912-a5e5-40a1-914d-bd81a9112d90/max-d-maximizing-due-diligence-in-minerals-supply-chains

The European Partnership for Responsible Minerals (EPRM). (n.d.-e). Peace Gold. https://europeanpartnership-responsibleminerals.eu/cms/view/e7f4c23c-8dcc-4b72-91f2-fc07f5352250/peace-gold

The Impact Facility. (2020). *Digging for Change: Towards a Responsible Cobalt Supply Chain*. https://www.theimpactfacility.com/wp-content/uploads/2020/06/20200618-%E2%80%93-Digging-for-Change-Towards-a-Responsible-Cobalt-Supply-Chain-%E2%80%93-V1.0.pdf

The London Metal Exchange (LME). (2021). *LME responsible sourcing*. https://www.lme.com/Education/Online-resources/LME-Insight/LME-Responsible-Sourcing

The London Metal Exchange (LME). (n.d.). *Responsible sourcing*. https://www.lme.com/en/about/responsibility/responsible-sourcing

The Mining Association of Canada. (n.d.). Protocols & Frameworks. https://mining.ca/towards-sustainable-mining/protocols-frameworks/

Trafigura. (2020). *Press release: Entreprise Générale du Cobalt enters into a trading agreement with Trafigura with the aim to transform the artisanal and small-scale cobalt mining sector in the Democratic Republic of the Congo* https://www.trafigura.com/press-releases/egc-enters-into-trading-agreement-with-trafigura

Trafigura. (2022). *Accelerating transition: The case for formalising artisanal and small-scale mined cobalt in the DRC*. https://www.trafigura.com/brochure/accelerating-transition-the-case-for-formalising-artisanal-and-small-scale-mined-cobalt-in-the-drc/

Trafigura. (n.d.). *Mutoshi Pilot Project*. https://www.trafigura.com/sustainability/responsible-sourcing/mutoshi-pilot-project/

U.S. Department of Labor Bureau of International Labor Affairs. (n.d.). *Combatting Child Labor in the Democratic Republic of the Congo's Cobalt Industry (COTECCO)*. https://www.dol.gov/agencies/ilab/combatting-child-labor-democratic-republic-congos-cobalt-industry-cotecco

U.S. Securities and Exchange Commission. (n.d.). *Public Comments on SEC Regulatory Initiatives Under the Dodd-Frank Act*. https://www.sec.gov/spotlight/regreformcomments.shtml

UKAS. (n.d.). *Accreditation vs Certification: What's the difference?* https://www.ukas.com/accreditation/about/accreditation-vs-certification/

Ulula, & (IPIS), I. P. I. S. (2022). *Matokeo – Data Collection on ASM in eastern DRC*. https://ipisresearch.be/wp-content/uploads/2022/11/Matokeo-Data-collection-on-ASM-in-eastern-DRC.pdf

Umicore. (n.d.). Responsible sourcing of cobalt. https://www.umicore.com/en/newsroom/topics-of-interest/cobalt-sourcing/

UNICEF. (2021). *RCS Global and UNICEF announce collaboration to tackle child rights infringements in artisanal mining*. https://www.unicef.org/drcongo/en/press-releases/rcsglobal-unicef-collaboration-tackle-child-rights-infringements-mining

UNITAR, & UN Environment. (2018). *Handbook for Developing National ASGM Formalization Strategies within National Action Plans*. https://unitar.org/sites/default/files/media/publication/doc/formalization_handbook_e_web_final.pdf

United Nations. (2011). *Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework*. https://www.ohchr.org/sites/default/files/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf

United Nations Global Compact. (n.d.). *The Ten Principles of the UN Global Compact*. https://unglobalcompact.org/what-is-gc/mission/principles

United States Government Accountability Office (GAO). (2020). *Conflict Minerals: Actions Needed to Assess Progress Addressing Armed Groups' Exploitation of Minerals*. https://www.gao.gov/products/gao-20-595

University of Washington Libraries. (n.d.). Literature review toolkit for policy studies: Grey literature. https://guides.lib.uw.edu/c.php?g=342205&p=5530841

USAID. (2020). *ISSUE BRIEF ARTISANAL & SMALL-SCALE MINING: USAID ACTIVITIES & APPROACHES*. https://www.land-links.org/wp-content/uploads/2020/01/USAID-ASM-Issue-Brief-Jan-2020.pdf

USAID. (n.d.). *Responsible Minerals Trade Fact Sheet*. https://2012-2017.usaid.gov/democratic-republic-congo/fact-sheets/usaiddrc-fact-sheet-responsible-minerals-trade

USAID, Global Communities, & Levin Sources. (2021). USAID's Zahabu Safi (Clean Gold) Project. https://www.levinsources.com/assets/pages/USAID-Zahabu-Safi-2-pager_August-2021_FINAL.pdf

Van Bockstael, S. (2018). The emergence of conflict-free, ethical, and Fair Trade mineral supply chain certification systems: A brief introduction. *The Extractive Industries and Society, 5*(1), 52-55.

Vela-Almeida, D., Gonzalez, A., Gavilán, I., Sánchez, G. M. F., Torres, N., & Ysunza, V. (2022). The right to decide: A triad of participation in politicizing extractive governance in Latin America. *The Extractive Industries and Society, 9*, 100875.

Verbrugge, B., & Geenen, S. (2020). *Global gold production touching ground: Expansion, informalization, and technological innovation*. Springer Nature.

Vetter, S. (2018). Le cobalt de la RDC – potentialités, risques et importance sur le marché mondial. TRENTIEME PLENIERE IDAK, Kolwezi, Democratic Republic of Congo.

Vio, E. (2018). Women in Mining. https://truestoryaward.org/story/68

Vogel, C., & Raeymaekers, T. (2016). Terr (it) or (ies) of peace? The Congolese mining frontier and the fight against "conflict minerals". *Antipode, 48*(4), 1102-1121.

Vogel, C. N. (2022). *Conflict Minerals Inc.* Hurst & Company.

Voluntary Principles on Security and Human Rights. (n.d.). *The Voluntary Principles on Security and Human Rights*. https://www.voluntaryprinciples.org/the-principles/

Voorberg, W. H., Bekkers, V. J. J. M., & Tummers, L. G. (2015, 2015/10/21). A Systematic Review of Co-Creation and Co-Production: Embarking on the social innovation journey. *Public Management Review, 17*(9), 1333-1357. https://doi.org/10.1080/14719037.2014.930505

Waddington, H., Sonnenfeld, A., Finetti, J., Gaarder, M., John, D., & Stevenson, J. (2019). Citizen engagement in public services in low- and middle-income countries: A mixed-methods systematic review of participation, inclusion, transparency and accountability (PITA) initiatives. *Campbell Systematic Reviews, 15*(1-2), e1025. https://doi.org/https://doi.org/10.1002/cl2.1025

Wakenge, C. I., Dijkzeul, D., & Vlassenroot, K. (2018). Regulating the old game of smuggling? Coltan mining, trade and reforms in the Democratic Republic of the Congo. *The Journal of Modern African Studies, 56*(3), 497-522.

Westhorp, G., Walker, D. W., Rogers, P., Overbeeke, N., Ball, D., & Brice, G. (2014). *Enhancing community accountability, empowerment and education outcomes in low and middle-income countries: A realist review.* https://eppi.ioe.ac.uk/cms/Portals/0/PDF%20reviews%20and%20summaries/Community%20accountability%202014%20Westhorp%20report.pdf?ver=2014-06-24-113114-340

Whitehouse, D. (2022). Barrick: LBMA to consider RAID allegations over Tanzania gold-mine deaths. *The Africa Report*. https://www.theafricareport.com/188111/barrick-lbma-to-consider-raid-allegations-over-tanzania-gold-mine-deaths/

Williams, G. (2004). Towards a repoliticization of participatory development: political capabilities and spaces of empowerment. In S. Hickey & G. Mohan (Eds.), *Participation. From tyranny to transformation: Exploring new approaches to participation in development.* (pp. 92-107). Zed Books.

World Bank. (2017). *Advocacy for Women's Rights in DRC's Mines Gains Momentum*. https://www.worldbank.org/en/news/feature/2017/12/13/advocacy-for-womens-rights-in-drcs-mines-gains-momentum

World Gold Council. (2019). *Responsible Gold Mining Principles*. file:///C:/Users/SKatzLavigne/Downloads/Responsible-Gold-Mining-Principles-en.pdf

Wrensch, J.-L. (2020). The difference between a policy, procedure, standard and guideline. https://www.michalsons.com/blog/the-difference-between-a-policy-procedure-standard-and-a-guideline/42265

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