

DELVE COUNTRY PROFILE

DEMOCRATIC REPUBLIC OF CONGO

ARTISANAL AND SMALL-SCALE MINING SECTOR

Partner Institution:



DELVE

A GLOBAL PLATFORM FOR ARTISANAL & SMALL-SCALE MINING DATA



Delve is an initiative to build a global platform for artisanal and small-scale mining (ASM) data. Its vision is a world in which ASM is recognized as an important contributor to global development.

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Definitions & Acronyms

3T: Tin, Tantalum, Tungsten

ARECOMS: *Autorité de Régulation et du Contrôle des Marchés des Substances minérales stratégiques* (Regulatory and Markets Control Authority for Strategic Mineral Substances)

ASM: Artisanal and Small-Scale Mining

ASGM: Artisanal and Small-Scale Gold Mining

BGR: *Bundesanstalt für Geowissenschaften und Rohstoffe* (German Federal Institute for Geosciences and Natural Resources)

CAMI: *Cadastre Minier* (Congolesse Mining Registry)

CEEC: *Centre d'Évaluation, d'Expertise et de Certification* (Centre for Evaluation, Expertise and Certification)

CTCPM: *Cellule Technique de Coordination et de Planification Minière* (Technical support to mining coordination and planning)

DRC: Democratic Republic of Congo

EGC: *Entreprise Générale du Cobalt* (General Cobalt Company)

FARDC: *Forces Armées de la République Démocratique du Congo* (Armed Forces of the Democratic Republic of Congo)

Gécamines: *Générale des Carrières et des Mines* (Commodity trading and Mining company)

ITA: International Tin Association

ITSCI: ITA Tin Supply Chain Initiative

KPCS: Kimberley Process Certification Scheme

LSM: Large-Scale Mining

MONUSCO: *Mission de l'Organisation des Nations-Unies pour la Stabilisation en République démocratique du Congo* (United Nations Organization Stabilization Mission in the DRC)

NDC-R: *Nduma Défense du Congo-Rénové* (Nduma Defense of Congo-Rénové)

OECD: Organization for Economic Cooperation and Development

SAEMAPE: *Service d'Assistance et d'Encadrement des Mines Artisanales et de Petite Échelle* (Artisanal and Small-Scale Mining Service)

UMHK: *Union Minière du Haut-Katanga* (Mining Union of Upper Katanga)

ZEA: *Zone d'Exploitation Artisanale* (Artisanal Mining Zone)

Country Profile Snapshot: Democratic Republic of Congo

 <p>MATERIALS MINED BY ASM (listed from largest number of miners to smallest per respective mineral)</p>	<p>Laws and policy</p>
<p>Diamonds Gold Copper and Cobalt 3T minerals: Cassiterite (Tin), Coltan (Tantalum), Wolframite (Tungsten) Colored gemstones, including Tourmaline Sporadically: Manganese, Silver, Monazite</p>	<p>2002 Mining Code 2003 Mining Regulation 2016 National Mining Policy 2018 Mining Code</p>
 <p>MINERAL GOVERNANCE FRAMEWORK</p>	<p>Government institutions</p>
<p>Government priorities</p>	<p>National Ministry of Mines Mining Administration, including its Provincial Mining Divisions Mining Registry (CAMI) Artisanal and Small-Scale Mining Service (SAEMAPE) Technical support to mining coordination and planning (CTCPM) Centre for Evaluation, Expertise and Certification (CEEC) Regulatory and Control Authority for Strategic Mineral Substances Markets (ARECOMS)</p>
<p>Develop a competitive and sustainable mining sector, which will be the foundation of an emerging country and the well-being of the Congolese population. To effectively fulfill this mission, the Ministry of Mines focuses on institutional capacity building, geological and mining research, the development of a competitive mining industry, the promotion of the image of the DRC as a conducive place for mining investments, and the development of supporting infrastructure in the mining sector (PROMINES 2016).</p> <p>Ensure good governance within the mining sector to secure an optimal development of mineral resources and therefore enhance the contribution of the sector to the country’s development and poverty reduction effort (PROMINES 2016).</p> <p>Reform the tax regime of mining industries operating in the DRC. The 2018 Mining code initiated a movement towards increased royalties.ⁱ</p> <p>Eradicate children’s presence and participation at mining sites.ⁱⁱ</p>	 <p>ECONOMIC AND DEVELOPMENT DATAⁱⁱⁱ</p>
	<p>2019 Population</p>
	<p>Total: 86,790,567 Labor force: 29,741,906 Women: 50.1% Men: 49.9%</p>
	<p>2019 Classification (GNI per capita)</p>
	<p>Low income: GNI per capita, atlas method (current USD): 520 GNI per capita (constant 2010 USD): 409.60</p>

2019 Gross Domestic Product
USD 47.32 Billion
2012 Poverty headcount ratio (2011 purchasing power parity)
Population on/below poverty line: 63.9% Population living on < USD 1.90 per day: 77.2% Population living on < USD 5.50 per day: 97.9%
 <p>LIVELIHOODS</p>
Employment
<p>ASM: An estimated 500,000 to 2 million individuals are directly employed by the sector. ASM contributes to the livelihoods of 8 to 10 million people in the DRC (World Bank 2008, 56). A 2020 study by IPIS has mapped about 2,951 mines, employing 427,469 artisanal miners in eastern DRC alone (IPIS Webmap 2020). In 2016, an estimated 2 million people were directly dependent on artisanal mining activities (mainly gold, cassiterite, coltan, and diamonds) (Bryceson and Greenen 2016, 304).</p>

<p>LSM: According to the Chamber of Mines' 2015 Annual Report, industrial mining generates employment for about 375,000 people (50,000 direct jobs in industrial mines, 25,000 indirect jobs linked to leveling work, equipment and security and 300,000 induced jobs related to transportation, food, etc.) (Chambre des Mines 2016). BGR evaluates that the LSM sector employs about 120,000 people. In 2013, the copper and cobalt mining industry, which constitutes the largest LSM sector in the country, was estimated to directly and indirectly employ between 20,000 and 30,000 people in the former Katanga province (Marysse and Tshimanga Mbuyi 2013, 28).</p>
Gender participation in ASM
<p>An estimated 20% (World Bank 2008, 14) to 40% (World Bank, 2017) of the ASM sector was female workers in 2008.</p> <p>According to a study published by the Gender Resource Facility in 2016, women's participation in the ASM sector in the Great Lakes Region was between 10 and 15% in the 3T sector and between 25 to 50% in the gold sector (Hinton 2016, 4).</p>

MINING SECTOR SUMMARY

General Mining Context

The Democratic Republic of Congo (DRC) is one of the richest countries in terms of natural resources in Africa. Its natural resources include large deposits of copper, cobalt, gold, 3T and diamonds. The Congolese Copper Belt contains resources estimated at 70 million metric tons of copper and 5 million metric tons of cobalt, representing today's largest known cobalt reserves ([World Bank 2008, 14](#)).

Mining intensified during the colonial period when Europeans, and mostly the Belgian colonial administration, invested in large-scale mining (LSM) of copper. The Union Minière du Haut-Katanga (UMHK) was created in 1906 and was granted extensive concessions in the Katanga Province located in the southeast of the country. From the mid-1920s, cobalt was mined as a copper by-product ([BGR 2019](#)).

The country became independent in 1960. In 1967, Mobutu Sese Seko nationalized the UMHK, giving birth to the state-owned Gécamines company. Thanks to its copper production, Gécamines accounted for 70% of the state revenues in the early 1970s ([Ndaywel è Nziem, Obenga, and Salmon 1998 cited by Geenen 2012](#)). However, a combination of internal and external factors set a progressive decline of the industrial production in motion. Over a twenty-year period, Gécamines' production had collapsed from 500,000 tons of copper in the 1970s to 30,000 in 1990 ([Geenen and Marysse 2015, 2](#)). Economic mismanagement induced by the Zairianization,^{iv} outdated mining techniques and the fluctuations of international prices all contributed to this decline ([Geenen and Radley 2014](#)). The Congolese state lost its revenues, and communities lost their source of income ([Marysse and Tshimanga Mbuyi 2013](#)).

Other nationalized mining companies that have their roots in the colonial period include the *Société des Mines d'Or de Kilo-Moto* (SOKIMO, later OKIMO, on the Ituri and Uélé gold concession); *Société Minière du Kivu* (SOMINKI, on the Kivu's gold and tin concessions, nowadays SAKIMA); and *Société Minière de Bakwanga* (MIBA, on Kasai's diamond concessions). These companies have a comparable history as Gécamines.

The dismantlement of industrial mining and economic hardship triggered the rapid development of artisanal mining. The 1982 law allowing all citizens of the DRC to apply for mining and trading licenses further stimulated the artisanal and small-scale mining (ASM) sector ([Bryceson and Geenen 2016](#); [Perks 2011](#)).

Facing financial asphyxia, the state sold mining concessions to private investors in the mid-1990s. However, the two Congolese Wars — 1996-1997 and 1998-2003 — jeopardized the immediate implementation of the new industrial mining contracts ([Marysse and Tshimanga Mbuyi 2013](#)). This, in combination with the disruption of the agriculture sector associated with the ongoing violence led to a new expansion of ASM activities ([Perks 2011](#)).

Armed group interference in the exploitation of natural resources during the conflicts raised concerns on the role of mining activities in the perpetuation of violence. The Congolese gold, coltan, cassiterite and wolframite (3TG minerals) became widely known as 'conflict minerals'.

In the early 2000s, the World Bank and the International Monetary Fund supported the DRC in a mining reform process with the aim, among others, to attract foreign investments and hence address the industrial mining slump. The 2002 Mining Code abolished the state monopoly on mining concessions and accelerated the development of joint ventures, favorable to private investors ([Aguirre Unceta 2020](#)). The

end of the war and the coinciding commodity price boom encouraged the rebirth of copper and cobalt industrial mining in Katanga, followed by investments in the gold sector in eastern DRC ([Bryceson and Geenen 2016](#)).

The 2002 Mining Code stipulated that artisanal mining activities would have to take place within 'artisanal mining zones' (ZEA), to be demarcated in areas where industrial mining was non-viable and that all miners would need to be registered. However, the re-establishment of industrial mining carried heavy consequences for artisanal miners including forced displacements. Starting in southern Katanga and expanding to the east, conflicts broke out between industrial companies, security forces and artisanal miners ([Hönke 2010](#); [Perks 2012](#)).

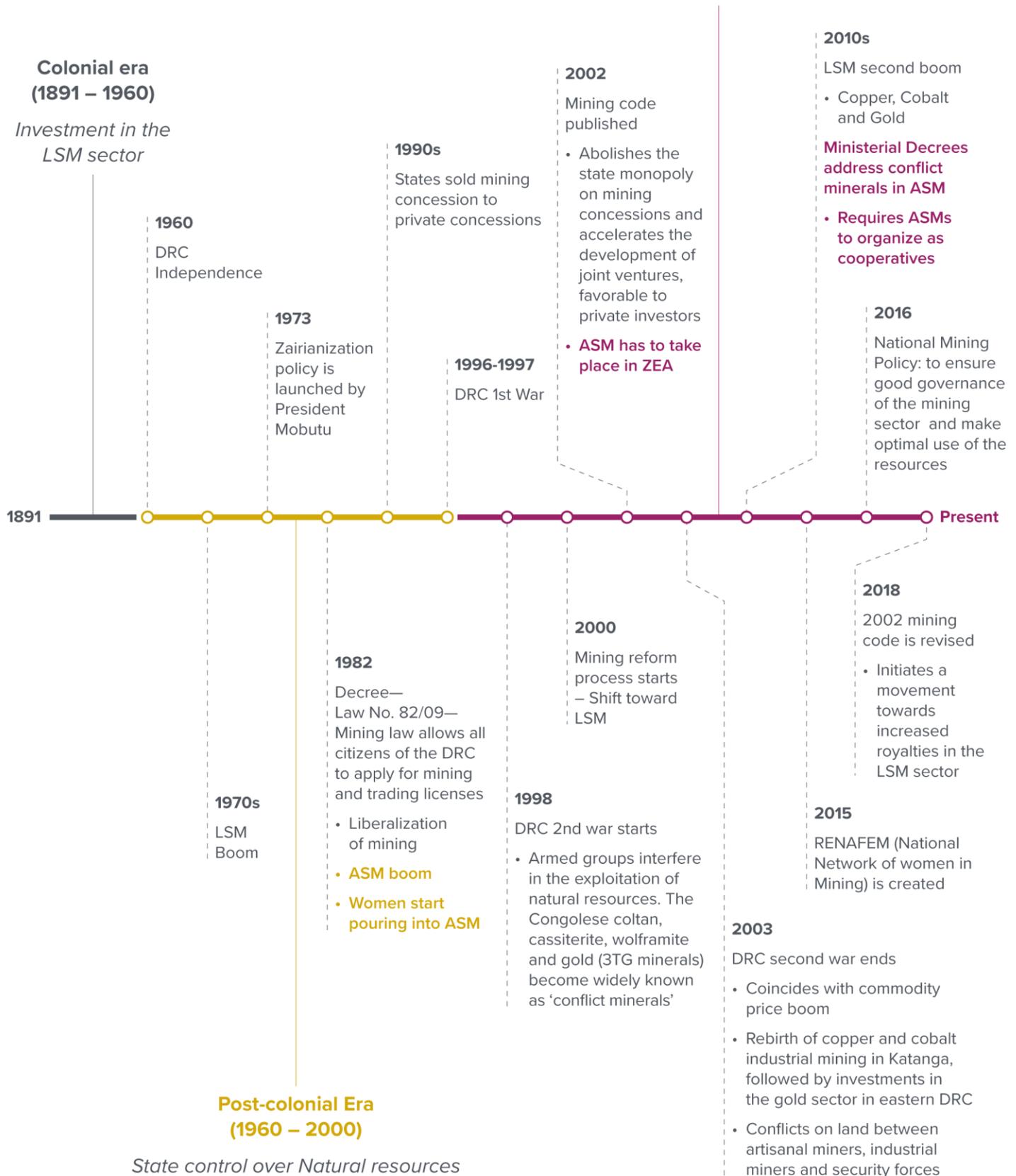
Because of the growing gap between the mining production's growth and lagging tax revenues, the DRC attempted, between 2007 and 2009, to renegotiate the rather fiscally advantageous industrial mining contracts ([Aguirre Unceta 2020](#)). The mining code remained however applicable until its revision in March 2018. This latest revision indeed initiated a movement towards increased royalties.^v

In 2011, the joint ventures had enabled the country to reach a copper production exceeding the 1970s 500,000-ton records ([Marysse and Tshimanga Mbuyi 2013, 23](#)) and DRC currently produces over a million tons of copper per year. The country is also the world's uppermost cobalt producer with some 82,000 tons exported in 2017 ([CTCPM 2018, 63](#)). The Katangese Copperbelt is now largely industrialized, especially in the provinces of Upper-Katanga and Lualaba. Industrial mining operations remain limited in the eastern provinces of the Kivus and Ituri. In the east, mineral supplies are principally produced by the ASM sector, even though a few industrial miners have started producing over the past few years.

Timeline

Mining reforms Era (2000s – present)

New process to attract foreign investments and address the industrial mining slump



ASM context and livelihoods

ASM directly employs an estimated 2 million individuals. This figure is more than five times higher than that of the industrial sector. In many rural areas, miners earn slightly more than their peers ([De Brier et al. 2020](#)). It is estimated that 20 ([World Bank 2008](#)) to 40% ([World Bank 2017](#)) of miners are women, but they face a number of barriers that keep them in lower job positions. Although they enjoy a relatively good source of income, miners face numerous health and safety risks, including lack of sanitary facilities, polluted drinking water, accidents and the use of mercury in gold recovery. The sector's contribution to the national mineral output is significant but illegal smuggling remains a major concern, mainly for ASGM. Other major concerns within the ASM sector include persisting interference of armed groups—particularly in Eastern DRC—illegal taxations, difficult access to formal credit and the often-tensed relations between artisanal and industrial producers.

EMPLOYMENT

In 2016, an estimated 2 million people were directly dependent on artisanal mining activities (mainly gold, cassiterite, coltan, and diamonds) ([Bryceson and Geenen 2016](#), 304). A 2020 study by IPIS has mapped about 2,951 mines, employing 427,469 artisanal miners in eastern DRC alone ([IPIS Webmap 2020](#)). The World Bank estimates that for each miner directly involved in artisanal mining, four to five persons indirectly rely on the sector. Consequently, artisanal mining contributed to the livelihoods of 8 to 10 million people in 2008 ([World Bank 2008, 56](#)), representing up to 16% of the Congolese population.

Engagement in ASM can be on a full-time or seasonal basis and can therefore constitute a primary or additional source of income. For many, artisanal mining has the advantage of presenting low entry barriers, enduring in fragile situations such as conflicts and generating more revenues than the agriculture sector. ASM represents a relatively good source of income in DRC. A recent study estimated that 3T miners earn around USD 2.7 and USD 3.3 per day in eastern DRC whereas 76% of the population lived with less than USD 1.9 a day in 2012 ([De Brier et al. 2020, 9](#)). Copper and cobalt miners have an average daily income of USD 7.65. Although 40% of the miners earn less than the Congolese legal daily minimum wage of USD 4.2, the daily rate may reach up to more than USD 50 a day ([BGR 2019, 36](#)).

Nevertheless, power structures do not shield miners from debt and poverty. In the ASM sector, investments and revenues are shared according to hierarchical roles. Mining licenses are often held by landowners who entrust the management of mining operations to pit owners (*PDGs*), who themselves hire the miners (*creuseurs*) and cover their daily rations and costs. Due to the poor access to formal credit, traders (*négociants*) often intervene in pre-financing mechanisms ([Vogel and Musamba 2017](#)). Once the production begins, revenues are distributed among all the above actors through production sharing agreements. Many miners – over a third of gold miners – are still paid in minerals. The production is also shared between the workers, including diggers, mineral crushers and washers ([Matthysen, Spittaels, and Schouten 2019](#)) Local traders act as middlepersons and buy minerals at the level of the mine site to sell them in trading houses (*comptoirs*) in the country's eastern border towns ([Vogel and Musamba 2017](#)). By pre-financing and supporting the day-to-day mining operations, traders ensure their access to mineral productions.

GENDER PARTICIPATION

While men account for the majority of the ASM workforce in the DRC, many women also rely on artisanal mining as a source of income. In 2008, the World Bank estimated that women accounted for around 20% of the ASM workforce in the country ([World Bank 2008](#)). In 2016, the participation of women and girls was estimated between 10% and 15% on 3T mining sites and 25% to 50% on gold sites within the Great Lakes Region ([Hinton 2016, 4](#)). In 2017, women accounted for about 40% of the DRC ASM workforce ([World Bank, 2017](#)).

However, where women are present on mining sites, gender marks the division of labor. While a very small fraction of women engages in digging, women are largely involved in mineral transportation and processing, two livelihoods that are less remunerated ([Buss et al. 2017](#)). Women also face a number of barriers preventing them from reaching higher positions. Structural inequalities cause a lack of access to capital ([Côté 2014](#)) and, in some areas, women are excluded from digging because their presence in pits is perceived as bad luck ([Hayes and Perks 2012](#)) or because of misconception about mining laws particularly pertaining to the rights of women in mining communities ([CASM 2007](#)). As a result, male miners were found to earn 29% more than their female counterparts in 3T mines in eastern DRC ([De Brier et al. 2020](#)). Nevertheless, ASM is still a remunerative livelihood for women. Mining activities enable them to provide for their household, diversify or develop economic activities and, if successful, increase their status ([Buss et al. 2017](#)).

Decades-long conflict has served to exacerbate the challenging conditions faced by women involved in the ASM sector ([CASM 2007](#)). Many women are vulnerable to sexual predation in mining towns and other forms of gender-based violence ([CASM 2007](#)). Yet, it has been argued that the dominant discourses associating artisanal mining in DRC with conflict and sexual violence has undermined the opportunity ASM provides for women ([Bashwira et al. 2014](#); [Perks and Vlassenroot, 2010](#)). Measures such as the promotion of alternative livelihoods for women and the introduction of new legislation prohibiting the presence of pregnant women on certified mining sites have negatively impacted women's participation in the sector and contributed to general obscuring of their roles ([Perks and Vlassenroot 2010](#); [Bashwira et al. 2014](#)).

During the last decade, women have been organizing themselves in associations to unite their voice, speak up for their rights and pool their resources to protect against financial shocks ([CASM 2007](#)). Since 2015, women involved in mining have united into a national network (RENAFEM) that has been working on enhancing gender equality in the mining sector, protecting women's rights and promoting their best interests ([World Bank 2017](#)).

LABOR, SAFETY AND WORKING CONDITIONS

Artisanal mining labor is generally speaking well-structured. Mineral extraction is executed by teams of diggers who work under the management of pit owners. Once extracted, rocks are crushed manually or mechanically (by *'concasseurs'*), washed and transported.

Artisanal mining comes with numerous health and safety risks, including among others the lack of sanitary facilities, pollution of drinking water, accidents and the use of mercury in gold recovery processing. The dominant lack of awareness on mercury-associated risks coupled with the invisibility of its pollution make it a silent threat for both mining communities and the environment ([Nkuba, Bervoets, and Geenen 2019](#)). Moreover, miners may suffer from a variety of respiratory illnesses due to their exposure to mineralized ore bodies ([Lahiri-Dutt 2011](#)). Safety is undermined by a lack of basic safety

equipment and measures. Pits can be very deep and lack structural support and ventilation systems, exposing miners to deadly accidents ([Pact 2010](#)). Flooding represent another occupational risk as water pumps are not always available ([BGR 2019](#)). Working conditions in mines may also require performing dangerous and harsh physical work, long hours work without breaks and night work in the mine ([Bashizi and Geenen 2015](#)). During peak production periods, some miners spend up to a month underground ([IKV Pax Christi, 201 cited by de Haan and Geenen 2016](#)). The presence of children has also been detected in some ASM sites. In the Copperbelt, this is prevalent in sites that are close to or near residential areas ([BGR 2019](#)).

In some areas of the DRC, armed groups and criminal networks within the FARDC interfere with the extraction of and/or the trade of ASM minerals. This has led to the widespread use of the term 'conflict minerals'. It is good to note that there are many secure ASM areas in DRC, which do not experience interference by armed groups. In the many cases of 'armed interference' in mining, the actors are undisciplined members of the DRC's security services. Data collected by IPIS in the past five years indicates that up to two thirds of the artisanal mining sites in eastern DRC are free from any interference by armed groups or the Congolese army ([IPIS Webmap 2020](#)). Nevertheless, in some cases, armed groups are present at mine sites to make profits from the control over natural resources. This is for example the case for the NDC-R, Mai Mai Simba and some Raia Mutomboki groups in eastern DRC. IPIS' data shows that in eastern DRC interference by the Congolese army is particularly high in the ASM gold sector (almost 25% on 1,027 ASM gold sites visited between 2015 and 2019) ([IPIS Webmap 2020](#)).

Key Minerals

ASM's contribution to national output is significant. The sector produces about 90% of the country's minerals ([Perks 2011](#)). The key minerals extracted by artisanal miners are diamond, gold, copper and cobalt, 3T and tourmaline. Miners are widespread throughout DRC, especially in eastern DRC (North and South Kivu, Ituri, Maniema), in the former Kasais, and in the former province of Katanga.^{vi} Illegal smuggling remains a major problem for most artisanally mined minerals, although the 3T sector has been increasingly formalized compared to other sectors.

DIAMOND

In the DRC, artisanal miners play a major role in **diamond** extraction. Diamonds are mainly mined in the former provinces of Kasai Oriental and Kasai Central. They are also found in the North and South Kivu, Maniema and former Katanga provinces ([World Bank 2008](#)). Diamond production is dominated by artisanal mining and according to official data, in 2017, the diamond artisanal production accounted for 81% of the country's production, representing 15.4 million carats. The same year, about 15 million carats were officially exported, generating USD 147 million ([CTCPM 2018, 16](#)). However, due to unregulated activity in the informal sector, these figures could be underestimated. Given that diamond production is dominated by artisanal mining, some small-scale industrial productions are classified as artisanal production ([KPMG 2014](#)).

Between 700,000 and one million artisanal miners were estimated to engage in diamond extraction in 2008 ([World Bank 2008](#)). Their production tends to be exported as rough diamonds due to the lack of cutting facilities in the country ([Pact 2010](#)). Before export, diamonds need to be certified by the Centre of Evaluation, Expertise and Certification (CEEC). Since 2003, the DRC is signatory to the Kimberley Process Certification Scheme (KPCS), implying that Congolese rough diamonds also need a Kimberley Process Certificate in order to be eligible for export ([Partnership Africa Canada & CENADEP 2007](#)). The implementation of the KPCS has contributed to significantly reduce illegal mining. However, it has been reported that illegal exportation of diamond persists. According to the CEEC, 40% of ASM production of diamond had been fraudulently exported ([UN 2007, 15](#)).

GOLD

The DRC is one of the top-ten ASM **gold** producers globally. Most of the DRC's artisanal and small-scale gold mining (ASGM) production takes place in the Haut-Uélé, Ituri, North and South Kivu, Maniema and Tanganyika provinces. The German Federal Institute for Geosciences and Natural Resources (BGR) identified four geological gold regions. The most exploited gold reserves are located in the "Kibaran Gold Province", overlapping North Kivu, South Kivu and the eastern part of Maniema ([Neuman et al. 2019](#)). The second largest region is the Kilo-Moto area ("Northern Gold Province") located in Ituri and Haut-Uélé provinces, home to rich deposits ([World Bank 2008](#)). The "Panafrican Gold Province" stretches along the eastern border of South Kivu and finally, the "Lubero Gold Province" is located near Lake Edwards in North Kivu and straddles the Ugandan border ([Neuman et al. 2019](#)).

Until the 2014 boom of the industrial gold production^{vii}, ASGM accounted for most of the Congolese gold output (Yager 2019). In 2019, IPIS counted more than 274,000 gold diggers over some 1,750 ASM sites in eastern DRC. Gold is the most important mineral mined in the ASM sector in the east, employing 80% of the artisanal miners in eastern DRC in 2019 (IPIS Webmap 2020). Over the last ten years, ASGM has increased, especially when compared to ASM 3T mining. There is an increasing trend of workforce migrations from 3T mining towards the gold sector (IPIS 2014). There are several factors that explain this shift, including the collapse of international prices and new formalization requirements in the 3T sector.

A survey of 1,220 mining sites from 2013 to 2015 estimated the average weekly production of a miner to be around 1.17 gram of gold. Of the sites survey data, the study estimated the total annual gold production at 11.6 tonnes for the respective sites visited (IPIS 2016). Official data recorded artisanal gold exports of respectively 230kg and 56kg in 2017 (CTCPM 2018, 39) and 2018 (CTCPM 2019 cited in Neuman et al. 2019, 1) implying that over 98% of ASGM production is smuggled out of the country through neighboring countries.

The UAE (Dubai) is the main destination for the Congolese artisanal mined gold (United Nations Group of Experts 2019). Illegal gold supply chains currently offer higher prices than the formal market, encouraging miners to stay in the informal sector. Moreover, gold is often used as a financial instrument, especially in remote areas, partly explaining the striking levels of unreported productions.

The huge informal gold sector equates with tax losses for the government. Ironically, the heavy tax burden is one of the reasons for artisanal miners and traders not to work in the formal sector. The multitude of authorities in the local ASGM supply chain means that ASGM stakeholders are heavily taxed informally. Working in the formal sector often means to be taxed twice, officially and informally.

COPPER AND COBALT

Despite a highly developed industrial mining sector, the Katangese Copper Belt still counts numerous artisanal miners involved in both **copper and cobalt** production. Cobalt production is mainly concentrated in the provinces of Haut-Katanga and Lualaba. The cities of Kolwezi, Likasi and Lubumbashi constitute important hubs for artisanal miners' production. Large-scale mining companies extract approximately 70% to 85% of cobalt along the copper belt, artisanal miners the other 15 to 30% (BGR 2019, 4; OECD 2019, 11). This is down from 2009 when Congolese cobalt production from artisanal mining accounted for 60% to 90% of the country production (Vanbrabant et al. 2009 cited by Tsurukawa et al., 2011, 43).

A significant number of LSM companies source from ASM, and this cobalt is blended with their production. Not only commercially, but also physically there is an extensive interaction between ASM and LSM: most of cobalt artisanal mining takes place in private concessions where the LSM is actively operating.^{viii} Therefore, it is difficult to make a clear distinction between LSM and ASM production in the supply chain (OECD 2019).

There are no official yearly statistics for annual copper and cobalt ASM production. However, BGR estimated that monthly production (April and May 2019) from the artisanal mining in the provinces of Haut-Katanga and Lualaba were 10,000 tons of copper ore and 24,800 tons of cobalt ore (BGR 2019, 23). The volume of exported cobalt was pushed to 17,960 tons in 2018, against 12,300 tons in 2017 and 10,300 tons in 2016 before falling back in 2019 (BGR 2019, 25). The rising cobalt demand and prices

have initiated migratory movements from the Kasais towards the Copper Belt where the cobalt artisanal mining workforce is estimated between 150,000 and 200,000 people ([BGR 2019](#), 3). Cobalt is not classified as a so-called 'conflict mineral'; however, the sector struggles with human rights issues, such as child labor and corruption ([IPIS, 2020](#)).

3T MINERALS

Eastern DRC is also home to large reserves of **3T minerals**, which constitute the livelihoods of many artisanal miners.

Cassiterite (Tin) has been exploited since 1910 ([Global Witness 2004](#)) and is primarily mined in the provinces of North and South Kivu, Maniema, and the former Katanga Province. In these areas, IPIS counted almost 760 ASM cassiterite sites employing over 94,900 people in 2019 ([IPIS Webmap 2020](#)). In 2017, the cassiterite artisanal production almost reached 19 tons. According to official data 12.5 tons were exported, generating USD 87 million ([CTCPM 2018, 54](#)).

Coltan (Tantalum) was discovered in the Kivu region in 1910 along with cassiterite (tin ore) ([Global Witness 2004](#)) and is artisanally mined by about 25,682 people in the provinces of North and South Kivu, Tanganyika, Haut-Lomami and Maniema ([IPIS Webmap 2020](#)). According to official data, artisanal miners produced 2,174 tons of coltan in 2017 from which 59% originated from North Kivu and 24% from Tanganyika ([CTCPM 2018, 50](#)). 1,358 tons were officially exported, generating USD 34 million ([CTCPM 2018, 55](#)). Coltan constitutes the most valuable 3T mineral on a per-unit base albeit its highly volatile prices and somewhat opaque market structure. It is often mined together with cassiterite and the two minerals are separated at a local processing stage prior to export.

Wolframite (Tungsten) is exploited in North and South Kivu, Maniema and Tanganyika provinces. Official records indicate that the ASM sector produced 251 tons of wolframite in 2017 – 47% from South Kivu, 32% from North Kivu and 21% from Maniema – ([CTCPM 2018, 52](#)) 197 tons were exported, generating USD 1.9 million. More than 7,651 artisanal miners are employed in 83 sites ([IPIS Webmap 2020](#)).

Over the last decade, the 3T ASM sector has increasingly been formalized, and most notably experienced a decline in the presence of armed group on 3T sites. This is mainly due to due diligence, certification and traceability measures that have been developed in the 3T sector in eastern DRC (see below). Nevertheless, the 2019 UN Group of Experts reported that 3T smuggling to the benefit of armed groups persists, as for instance in the Masisi territory ([United Nations Group of Experts 2019](#)).

TOURMALINE

Finally, **Tourmaline** emerged as a significant gemstone in DRC since 2012. Deposits are located in Masisi and Kalehe territories (along the border of North and South Kivu provinces) and in the eastern Manono territory (Tanganyika province) ([Weyns, Hoex, and Matthysen 2016](#)). Since 2012, a rise in gemstone prices has reportedly seen the tourmaline sector attracting thousands of artisanal miners during boom periods in the Kivus alone ([IPIS and SaveActMine 2016](#)). Tourmaline artisanal mining experienced spikes in artisanal worker numbers in 2014 and 2015, attracting more than 4,000 diggers in 2015 in Masisi, Kalehe and Manono territories ([IPIS Webmap 2020](#)). The sector operates largely informally with inherent complications as the best quality stones can often be pocketed by diggers and therefore evade formal channels of record. The desire to protect illicit trading can lead some stakeholders to over or under report

production. As a result, there are also notable difficulties with official statistics regarding production ([IPIS and SaveActMine 2016, 23](#)).

Table 1. Key Minerals summary

Mineral	Geography/ region	# Miners	Production (2017)	Exportation (2017)	Revenue generated
Gold	Haut-Uélé, Ituri, North and South Kivu, Maniema, and Tanganyika	274,000 ¹	302.23 kg ²	230 kg ²	USD 8.2 million ²
3Ts	Cassiterite	94,900 ¹	18,892.89 tonnes ²	12,536.45 tonnes ²	USD 87 million ²
	Coltan	25,682 ¹	2,174 tonnes ²	1,358 tonnes ²	USD 34 million ²
	Wolframite	7,651 ¹	251 tonnes ²	197 tonnes ²	USD 1.9 million ²
Copper and Cobalt	Haut-Katanga and Lualaba	150,000 - 200,000 ³	ASM Monthly Estimate 2019 of raw ore Cu Ore: 10,000 tons Co Ore: 24,800 tons ³	12,300 tonnes ³	Not Stated
Diamond	Former Kasai Oriental, Kasai Central, North and South Kivu, Maniema, and former Katanga	700,000 - 1 million ⁴	15.4 million carats ²	14.6 million carats ²	USD 147 million ²
Tourmaline	North and South Kivu, and Tanganyika	1,960 ¹	Unknown	Unknown	Unknown

Sources: ¹[IPIS Webmap 2020](#), ²[CTCPM 2018](#), ³[BGR 2019](#), ⁴[World Bank 2008](#)

Development & Economic Indicators

The economy of the DRC is highly dependent on the mining sector. Despite the challenges faced by the sector, data and information exist to demonstrate the contribution of ASM to achieving SDGs 1, 2, 5, 8, 9, 13, 17 in the DRC, including poverty reduction, employment and partnerships revitalization. Major challenges include its adverse impact on the environment, health and education of children. Formalization efforts can help overcome the challenges still facing the sector and further enhance its contribution to local and national socio-economic development.

GENERAL DEVELOPMENT & ECONOMIC CONTEXT

The DRC is the largest country in Sub-Saharan Africa and the most populated country in central Africa. The country is still recovering from a series of conflicts that proliferated in the 1990s and that dramatically reduced government revenue and increased external debt. Political instability, unstable institutions and lack of infrastructures have long been severe impediments to the country's economic and social progress. In 2019, the DRC ranked 179 out of 189 countries in the Human Development Index (Human Development Index 2019). Life expectancy only reached 60 years in 2017 and, according to the latest survey (2013-14), 74% of the country's population faces multidimensional poverty ([UNDP 2019, 6](#)). Agriculture has suffered from low productivity while energy shortages have hindered industrialization efforts. In the second half of 2019, 15.9 million people, accounting for 26% of the population, were in severe acute malnutrition with emergency situations ([Integrated Food Security Phase Classification 2020](#)). The level of secondary education remains low in rural areas. Health services are generally of poor quality and public spending tends to be disproportionately oriented towards the capital city. Underemployment affects 86% of workers, especially young people who have limited access to jobs and socio-professional insertion programs (AFDB, 2020). Except for the low performance recorded in 2009 and 2016, the DRC's annual economic growth fluctuates between 5 and 9 percent since 2003.^{ix}

The DRC economy remains dependent on mining products, which makes it vulnerable to global price fluctuations. In 2017, the mining sector generated USD 168 billion accounting for 17% of GDP. Together with oil and gas, the mineral sector accounted for 98% of DRC's exports ([EITI 2020](#)). However, mining revenues have failed to enhance national and local development ([Geenen 2012](#)). As a result, DRC is often cited as an illustration of the 'resource curse' phenomenon.^x This curse may be attributed to a number of political and economic factors. According to the World Bank, it is mainly due to bad governance. The Bank estimates that the gap between officially registered taxes and expected fiscal revenues is mainly due to non-declaration, smuggling and a lack of capacity ([World Bank 2008](#)).

ASM LINKAGES TO DEVELOPMENT INDICATORS

The links between ASM and Sustainable Development Goals (SDGs) are evident in the DRC. The impact of ASM on SDGs is mixed as it is both positive and negative. Data and information exist to demonstrate the sector's contribution to the achievement of SDGs 1, 2, 5, 8, 9, 13, 17, including poverty reduction, employment, and revitalization of partnerships. Major challenges include its adverse impact on the environment, health and education of children. Formalization efforts can further leverage ASM's

contribution to the social and economic development of the DRC and enable the sector to continue to provide the world with minerals produced under acceptable labor and human rights conditions.

The table below shows examples of linkages between ASM and SDGs in the DRC.

Table 2: ASM linkages to Sustainable Development Goals

 <p>1 NO POVERTY</p>	<p><i>End poverty in all its forms everywhere</i></p>	<ul style="list-style-type: none"> o An estimated 16% of the population are dependent on artisanal mining for their livelihood.¹ o ASM provides miners with earnings up to five times higher than those of a farmer,² petty traders and local administration officers.³ o Despite being a rather lucrative livelihood compared to other sectors, ASM’s contribution to local development is not optimal. Poverty remains widespread within artisanal mining communities.⁴
 <p>2 ZERO HUNGER</p>	<p><i>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</i></p>	<ul style="list-style-type: none"> o ASM and agriculture are both important livelihood strategies in the DRC. They are sometimes located at the same geographical space and may impact and complement each other. o The agriculture sector suffers from low productivity drawing food insecurity⁵ and ASM has become a main source of income, creating business opportunities and providing assets to households for agriculture activities. o Yet, poorly managed ASM creates tensions between both sectors as they also compete for resources such as labor and capital.⁶
 <p>3 GOOD HEALTH AND WELL-BEING</p>	<p><i>Ensure healthy lives and promote well-being for all at all ages</i></p>	<ul style="list-style-type: none"> o Artisanal mining labor in the DRC is subjected to numerous health and safety risks, including among others the lack of sanitary facilities, pollution of drinking water, accidents, exposure to respiratory illness in the Copperbelt and pollution due to the use of mercury in gold recovery processing. In some cases, miners are exposed to deadly accidents.² o Nevertheless, there is no official data collected at the national level on the health impacts of artisanal mining on the miners themselves and on the surrounding communities. The National Health Information System (SNIS) does not provide specific data for mining areas.⁷
 <p>6 CLEAN WATER AND SANITATION</p>	<p><i>Ensure availability and sustainable management of water and sanitation for all</i></p>	<ul style="list-style-type: none"> o When it is poorly managed, artisanal mining further destroys land, pollutes rivers and other sources of water for local communities. These risks also affect local communities and are mainly due to the lack of awareness on basic measures as well as limited financial capacities of miners to access equipment. o Local unions and cooperatives have started involving in multi-stakeholder initiatives to improve sustainability of the artisanal mining sector in the DRC.⁸
 <p>15 LIFE ON LAND</p>	<p><i>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</i></p>	<ul style="list-style-type: none"> o Poverty usually drives children’s participation in the ASM, therefore reducing their access to education. Estimates of children’s participation to ASM have ranged from 4,714 in the DRC copperbelt⁹ to 35 ,000 in the south-eastern provinces.¹⁰ o A recent study in South Kivu highlighted that while 45% of the interviewed miners had been to secondary school or even university, their children would be less likely to go to school, implying a potential set back in educational gains.¹¹ o However, the new enforcement of free primary education in the DRC is an opportunity to strengthen the fight against child labor. Furthermore, the income generated by miners within a formalized ASM sector can provide families with sufficient funds to pay for their children’s higher education and open up more opportunities for them.
 <p>4 QUALITY EDUCATION</p>	<p><i>Obtaining Quality Education is the foundation to improve people’s lives and Sustainable Development</i></p>	<ul style="list-style-type: none"> o Poverty usually drives children’s participation in the ASM, therefore reducing their access to education. Estimates of children’s participation to ASM have ranged from 4,714 in the DRC copperbelt⁹ to 35 ,000 in the south-eastern provinces.¹⁰ o A recent study in South Kivu highlighted that while 45% of the interviewed miners had been to secondary school or even university, their children would be less likely to go to school, implying a potential set back in educational gains.¹¹ o However, the new enforcement of free primary education in the DRC is an opportunity to strengthen the fight against child labor. Furthermore, the income generated by miners within a formalized ASM sector can provide families with sufficient funds to pay for their children’s higher education and open up more opportunities for them.

 <p>5 GENDER EQUALITY</p>	<p><i>Achieve gender equality and empower all women and girls</i></p>	<ul style="list-style-type: none"> Women involved in ASM support their household, are able to diversify their economic opportunities and increase their social status thanks to ASM-related activities. In 2017, women accounted for about 40% of the DRC ASM workforce.¹² However, gender norms still impact women's livelihood opportunities in the ASM sector and impede their professional progress, preventing them to reach high level positions and to earn as much as their male counterpart. A 2020 study found male miners earn 29% more than their female counterparts in 3T mines in eastern DRC.⁴
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p><i>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</i></p>	<ul style="list-style-type: none"> ASM provides employment opportunities to up to 2 million people in the DRC, including both educated and unskilled workers.¹³ This is about 2.5% of the Congolese population. By promoting fair labor standards and social protection for miners, the sector can provide more decent work in rural areas. Compared to the industrial sector, the artisanal sector has advantages in terms of inclusive development. The added value of the sector remains almost entirely in the local communities in form of income in the hands of artisanal miners and other actors involved in ASM.³ ASM is also parts of rural livelihood diversification strategies as it is an avenue of income generation. The sector is a stimulus for trade and subsidiary business development around mines. As noted above, about 16% of the DRC population is believed to indirectly benefit from the sector.¹ At the national level, ASM generates tax and export revenues. Diamonds added a production value of USD147 million in 2017 compared to about USD60 million generated by the LSM sector.¹⁴ The ASM official share in production of cobalt is estimated to be about a quarter while cassiterite exploitation in North Kivu is 100% artisanal, with exports valued at around USD 87 million in 2017.¹⁴ However, while significant revenues pass through the sector, they often bypass the state's fiscal apparatus. The sector's contribution to GDP-and the national budget-is still negligible.¹⁵
 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p><i>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</i></p>	<ul style="list-style-type: none"> Cobalt is one of the critical minerals for renewable energy that is used in emerging technologies and electric vehicle industry, and is therefore linked to fossil fuels reduction and climate change mitigation efforts. ASM accounts for about 20-30% of the DRC's cobalt production and overall DRC's mining sector produces an estimated two third of the world's cobalt.¹⁶ In 2019, ASM production accounted for about 10% of the global supply, which is higher than the production of any other country in the world. This production helped prevent a supply deficit of cobalt in the global market.¹⁷
 <p>13 CLIMATE ACTION</p>	<p><i>Climate change is a global challenge that affects everyone, everywhere</i></p>	
 <p>17 PARTNERSHIPS FOR THE GOALS</p>	<p><i>Revitalize the global partnership for sustainable development</i></p>	<ul style="list-style-type: none"> Partnerships at the global, regional, national and local levels have been created in order to help formalize the ASM sector and overcome the range of interrelated challenges that the sector suffers from in the DRC. Supply chain initiatives have also connected actors at the upstream, midstream and downstream levels. Moreover, there have been linkages between ASM and LSM actors that are mainly driven by social and environmental concerns. Going beyond power relations between the two sectors and looking at how best to exploit their relationship and synergy can foster economic transformation.⁶

Sources: ¹ World Bank 2008 , ² Pact, 2010 , ³ EURAC 2017 , ⁴ De Brier et al. 2020 , ⁵ SIDA Policy Brief, accessed in July 2020 , ⁶ Karaki 2018, ⁷ PROMINES 2014 , ⁸ Tsurukawa et al. 2011 , ⁹ Faber et al. 2017 , ¹⁰ Kara 2018 , ¹¹ Voqel, Musamba, and Radley 2018 , ¹² World Bank 2017, ¹³ Bryceson and Geenen 2016 , ¹⁴ CTCPM 2018 , ¹⁵ Garrett 2007 , ¹⁶ OECD 2019 , ¹⁷ DRC Mining Week Webinar, June 9, 2020.

Mineral Governance Framework and ASM Formalization

In the DRC, formalization efforts of the ASM sector focus mainly on titling, registration and traceability. Key government institutions that oversee the sector include the Ministry of Mines, the Provincial Mining Divisions, and technical institutions such as SAEMAPE and CEEC. ASM is to take place in artisanal exploitation zones (ZEA) and is limited in scope and equipment ([Pact 2010](#)). Artisanal miners must be Congolese nationals and join a cooperative in order to be eligible to mine.^{xi}

MINING STRATIFICATION

The [Congolese Mining Code](#) stipulates that any person, association or company wishing to engage in mining should first apply for a research permit (*permis de recherches*), valid for eight years. If minerals are discovered, exploitation permits (*permis d'exploitation*) are delivered according to the extent of the deposits. Rights on large deposits are allocated to large-scale mining through renewable thirty-year exploitation permits.

According to the law, ASM has to take place in Artisanal Exploitation Zones (*Zone d'Exploitation Artisanale*, ZEA), delimited upon decree of the Ministry of Mines. ASM activities are reserved to Congolese nationals and are limited in scope and equipment ([Pact 2010](#)). They are regulated by a code of conduct specifying safety, health and environmental requirements. Artisanal mining licenses (*carte d'exploitant artisanal*) are to be bought each year. Since 2010, artisanal miners also need to be registered in a cooperative.

Local mineral traders need to hold a trading license (*carte de négociant*) and have to sell their minerals to designated buying houses (the so-called *comptoirs*, or *entités de traitement*). The latter are the only entities that can officially export artisanally produced minerals.

MINING FORMALIZATION REGULATIONS (ASM FOCUS)

Formalization efforts mainly focus on titling, registration and traceability ([de Haan and Geenen 2016](#)). Several national and international initiatives were taken since the late 2000s to tackle informality and mainly, to address the issue of 'conflict minerals'. In 2009, the Congolese government released a handbook for traceability (*Manuel des procédures de traçabilité des produits miniers, de l'extraction à l'exportation* cited in [Geenen and Radley 2014](#)). In 2010, [Section 1502 of the American Dodd-Frank Act](#) imposed due diligence measures to companies trading on US stock exchanges sourcing from eastern DRC for gold and 3T minerals.

Dodd-Frank Section 1502 did create momentum to increase efforts that addressed conflict financing from mineral exploitation and trade. However, at the same time, and as a more short-term consequence, increased scrutiny on conflict financing led most international mineral traders to abstain from sourcing minerals from the DRC, the so-called '*de facto* embargo' ([IPIS 2019](#)).

When Dodd-Frank 1502 came into effect, a wide range of other responsible sourcing and/ or formalization initiatives were simultaneously being implemented in the DRC. Through the 2010 Lusaka Declaration, the member states of the International Conference on the Great Lakes Region (ICGLR) launched the

Regional Initiative on Natural Resources (RINR) and endorsed the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict Affected and High-Risk Areas. The best-known tool of the RINR is the Regional Certification Mechanism (RCM) for 3TG. The RCM includes mine site and mineral export certification criteria, traceability and chain of custody requirements. In the DRC, 3TG minerals from ASM mines can only be legally exported, with an RCM certificate, if they are sourced from validated mines and if the exporter can show the mine of origin and trade route of a mineral batch.

Besides official certification, some actors have also launched traceability initiatives to disclose the mineral trading route, from the mine of origin to the point of export. The best-known example is the iTSCI traceability scheme.^{xii} Other initiatives include the Kampene Gold Traceability Pilot project ([Neuman et al. 2019](#)), the Capacity Building for Responsible Minerals Trade (CBRMT) project, and the Just Gold project in Mambasa territory ([IMPACT 2018](#)). While the 3T initiatives are covering large territories in the east, the gold initiatives are more limited in scope.

A major challenge faced by the different responsible sourcing initiatives is that costs are currently not shared between upstream, midstream and downstream actors. Due diligence costs are largely passed on to local miners without any meaningful offsetting compliance premium on prices for midstream and downstream actors.

GOVERNMENT PRIORITIES & KEY TOPIC AREAS

The DRC has been focusing on developing a competitive and sustainable mining sector, so that it becomes the foundation of an emerging country and the well-being of the Congolese population. To effectively fulfill this mission, the Ministry of Mines focuses on institutional capacity building, geological and mining research, and the development of a competitive mining industry. Further, the government is working on promoting the image of the DRC as a conducive place for mining investments, and the development of supporting infrastructure in the mining sector ([PROMINES 2016](#)).

Another area of focus of the DRC has been on ensuring good governance within the mining sector to secure an optimal development of mineral resources and therefore enhance the contribution of the sector to the country's development and poverty reduction effort ([PROMINES 2016](#)). The reform of the tax regime has been at the center of recent policy change. In 2018, the DRC revised the Mining code by initiating a movement towards increased royalties.^{xiii}

As part of its efforts to formalize and manage the ASM sector, the DRC government has created, in late 2019, the EGC –*Entreprise Générale du Cobalt*–, a new commercial entity with exclusive right to purchase and market strategic mineral substances from artisanal miners.

DRC has also been focusing on abolishing the presence of armed groups in mineral sites of Eastern DRC, fighting smuggling and illegal taxation, as well as resolving ASM-LSM tensions. In 2017, the country pledged to eliminate child labor and hazardous labor conditions in the ASM sector by 2025.^{xiv}

GOVERNMENT INSTITUTIONS

At the national level, the management of the ASM sector is the responsibility of the **Ministry of Mines**. The latter is in charge of the creation of Artisanal Exploitation Zones (ZEAs) and regulates the trade of artisanal minerals. Once allocated, mining titles are registered in the national database by the Mining Registry (CAMI).

At the decentralized level, the **Provincial Mining Division** is in charge of the daily management of the ASM sector, including the granting of miners' and mineral traders' licenses. Technical services also engage with artisanal miners at the local level. **SAEMAPE**, the *Service d'Assistance et d'Encadrement des Mines Artisanales et de Petit Échelle* – formerly SAESSCAM –, provides technical support to artisanal miners and cooperatives at the level of the mine. SAEMAPE however, lacks the human, financial and material resources to fully support artisanal miners in improving their working conditions, productivity, and formalisation.

The Centre for Evaluation, Expertise and Certification - *Centre d'Évaluation, d'Expertise et de Certification (CEEC)* is involved in the certification of precious minerals and has the responsibility to implement the Kimberley Process Certification Scheme in the DRC's diamond sector. Finally, the **CTCPM** – *Cellule Technique de Coordination et de Planification Minière* – collects data on ASM for statistical purposes and is in charge of developing technical solutions to increase productivity and safety within the sector.

In late 2019, the DRC government created **ARECOMS** -*Autorité de Régulation et du Contrôle des Marchés des Substances Minérales Stratégiques* – a regulatory and market control body for strategic minerals.

However, the organizational structure from the central to the provincial level appears to be cumbersome, rigid and inefficient ([Ministry of Mines 2018](#)), and the relationships between some government entities seem unclear and sometimes conflicting.

ASM ASSOCIATIONS AND ALLIANCES

Since 2010, artisanal miners must join a cooperative in order to be eligible to mine.^{xv} The Mining Code has a vision of cooperatives as small production units evolving into business units. This requires considerable financial capital, technical knowledge, and material resources ([Geenen and Radley 2014](#)).

Cooperatives are supposed to strengthen the position of the miners vis-à-vis of the other players in the mining sector (state services, landowners, traders, and the export counters, export counters) ([EURAC 2017](#)). Yet, cooperatives in the DRC do not match the criteria of a cooperative as described under international standards ([Bahalaokwibuye 2017](#)). Many miners consider them as yet another 'mechanism of state control' imposed on them ([de Haan and Geenen 2015](#)), which increases taxation. Most cooperatives are top-down organizations, subject to local elite capture. Miners are not involved in the selection of their leaders; they are not aware of their rights to be represented and usually do not participate in cooperative meetings ([de Haan and Geenen 2015](#)). Cooperatives provide little or no assistance to the miners. They ask financial contributions to miners and therefore increase the costs linked to the formal sector ([Vogel, Musamba, and Radley 2018](#)). Moreover, participation in cooperatives requires an artisanal mining card, which little miners have and hence, involvement of miners is very low.

At the mining sites there are often alternative types of organizations, such as *associations* or *comités des creuseurs*, that are much more active in defending miners' interests. A selection of active associations and networks include:

- **Chambre des Mines, Chamber of Mines:** The Chamber brings together all companies operating in the mining sector in DRC. The chamber supports the interests of mostly large-scale mining companies and interfaces with public authorities to develop policies to support the development of mining activities.
- **Réseau National des Femmes dans les Mines (RENAFEM), National Network of Women in Mining:** A national network of stakeholders working jointly to disseminate laws on the participation and protection of women in the mining sector.
- **Commission Interministérielle chargée du Suivi de la question du Travail des Enfants dans les Mines artisanales (CISTEMA), Interministerial Commission responsible for monitoring the issue of Child Labor in artisanal mines:** A government advisory body that coordinates and monitors the actions of state and non-state actors in the implementation of the National Sector Strategy for the fight against child labor in artisanal mines in the DRC.
- **Générale des Coopératives Minières du Sud-Kivu (GÉCOMISKI), General of the Mining Cooperatives of South Kivu:** An association of cooperatives in South Kivu that focuses on mining activities, lobbying for the interests of artisanal miners as well as training and information on the principles and laws related to artisanal mining in DRC ([Buraye 2018, 109](#)).
- **Fédération des Coopératives Minières du Katanga (FECOMIKAT), Federation of Mining Cooperatives of Katanga:** An entity bringing together all cooperatives active in the Haut-Katanga province in the 3Ts and Copper/Cobalt sectors.
- **Comités Provinciaux de Suivi des activités minières (CPS) ou Comités Provinciaux de Pilotage des activités minières (CPP), Provincial Mining Activities Monitoring Committees (CPS) or Provincial Mining Activities Steering Committees (CPP):** Multi-stakeholder committees (government, private mining operators, civil society, local authorities and specialized technical services) working for the management of due diligence issues in the 3T sector. Committees are very active and operational in the provinces of North Kivu, South Kivu, Maniema, Tanganyika, Haut-Katanga, Haut-Lomami and Lualaba.
- **Coopérative Minière Artisanale de Kolwezi (COMIAKOL), Artisanal Mining Cooperative of Kolwezi:** The first cooperative in Lualaba Province to have set up a model artisanal mine meeting formalization requirement in accordance with OECD standards in the Copper and Cobalt sector.

Key Data Needs & Calls to Action

To better understand the scale and concerns of the ASM sector, data on ASM sites, including data on production, number of workers, state presence, armed group presence, etc., should be regularly updated. In this regard, SAEMAPE and CTCPM are in need of capacity building on technical skills, such as quantitative data management.

There is also little available data on the environmental impact of ASM in the DRC and no official data collected at the national level on the health impacts of ASM on the miners and the populations living near artisanal mining sites. Such data should allow the government to take appropriate measures in improving health conditions in mining sites, reducing the effect of ASM on the environment and enforce land restoration as required by the mining code.

The diamond sector is one of the most important ASM sectors in the DRC in terms of the number of miners and revenues generated by the sector. Yet, the sector is poorly understood given that little research has been conducted on the sector, and international attention has focused on 3T, gold and cobalt sectors primarily. Research needs include gender relations and repartition in the sector, working conditions of miners, key challenges that the sector faces, key distinctions between artisanal and semi-industrial mining sectors, etc. A general mapping may help assess the activities of ASM of diamond in the DRC.

Finally, smuggling and illegal taxation is one of the key issues that the ASM sector faces in the DRC. At the same time, the heavy tax burden and the lack of a region wide harmonization of taxes is often mentioned as one of the reasons for artisanal miners and traders do not want to work in the formal sector. An overview of the legal (and illegal) taxes along the supply chain may highlight opportunities for improvement of the taxation framework.

Endnotes

ⁱ Loi n°18/001 du 09 mars 2018 modifiant et complétant la Loi n° 007/2002 du 11 juillet 2002 portant Code minier. Available online.

ⁱⁱ The Ministry of Mines currently works, together with the International Labor Organization, on the Plan Opérationnel Révisé de la Stratégie Nationale Sectorielle de Lutte contre le travail des enfants dans les mines artisanales et sur les sites mines artisanaux en RDC. More information available online.

ⁱⁱⁱ World Bank and OECD National Accounts data files.

^{iv} Official state ideology and policy of the Mobutu regime that intended to encourage economic autonomy and national identity

^v Loi n°18/001 du 09 mars 2018 modifiant et complétant la Loi n° 007/2002 du 11 juillet 2002 portant Code minier. Available online.

^{vi} See IPIS interactive webmap showing over 1,800 ASM sites visited by IPIS between 2015 and 2019 at www.ipisresearch.be/mapping/webmapping/drcongo/v6

^{vii} According to the Ministry of Mines' data, DRC's industrial gold production increased from around 6,000 kgs in 2013 to over 23,000kg in 2014 and 31,000kg in 2015. The Kibali Mine's production participated to this expansion.

^{viii} See map of the Congolese Copper Belt highlighting the superposition of ASM and LSM activities in [BGR 2019](#), p15

^{ix} World Bank and OECD National Accounts data files

^x The resource curse, or paradox of the plenty, refers to the paradox that most resource-rich countries fail to benefit from their natural resource wealth (oil, gas and mining) and to transform them into economic growth. Instead, they tend to have negative outcomes in terms of democracy, peace and stability, and socioeconomic development compared to their non-resource-rich neighbors

^{xi} Arrête 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

^{xii} ITSCI is an industry led, not-for-profit, multi-stakeholder initiative developed by ITA, the International Tin Association. ITSCI covers tin, tantalum and tungsten ores.

^{xiii} Loi n°18/001 du 09 mars 2018 modifiant et complétant la Loi n° 007/2002 du 11 juillet 2002 portant Code minier, Available online.

^{xiv} The Ministry of Mines currently works, together with the International Labor Organization, on the Plan Opérationnel Révisé de la Stratégie Nationale Sectorielle de Lutte contre le travail des enfants dans les mines artisanales et sur les sites mines artisanaux en RDC. The DRC national strategy to address child labour that was developed in 2017 is available online.

^{xv} Arrête 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

References

- African Development Bank Group. 2020. "Democratic Republic of Congo Economic Outlook." Available at <https://www.afdb.org/en/countries-central-africa-democratic-republic-congo/democratic-republic-congo-economic-outlook> , accessed May 6, 2020.
- Aguirre Unceta, Rafael. 2020. "République démocratique du Congo: revenus miniers et dépenses publiques pour le développement." *Mondes en développement* n°189, no. 1: 55. Available at <https://www.cairn.info/revue-mondes-en-developpement-2020-1-page-55.htm>
- Bahalaokwibuye, Christian Bahati. 2017. "Hybridation normative et institutionnelle dans les coopératives minières. Entre pluralisme juridique et ineffectivité du droit coopératif congolais." *Canadian Journal of Law and Society / Revue Canadienne Droit et Société* 32, no. 01: 137–56.
- Bashizi, Anuarite, Geenen, Sara. 2015. Les limites d'une 'gouvernance par le bas': les logiques des coopératives minières à Kalimbi, Sud-Kivu. In: Marysse, S. et Omasombo Tshonda, J. (eds.) *Conjonctures Congolaises 2014. Politiques, territoires et ressources naturelles : changements et continuités*, Cahiers Africains, Paris, L'Harmattan : 239-260.
- Bashwira, Marie-Rose, Jeroen Cuvelier, Dorothea Hilhorst, and Gemma van der Haar. 2014. "Not Only a Man's World: Women's Involvement in Artisanal Mining in Eastern DRC." *Resources Policy* 40: 109–16.
- BGR (Bundesanstalt für Geowissenschaften und Rohstoffe). 2019. "Mapping of the Artisanal Copper-Cobalt Mining Sector in the Provinces of Haut-Katanga and Lualaba in the Democratic Republic of Congo." Hannover: Bundesanstalt für Geowissenschaften und Rohstoffe.
- Bryceson, Deborah Fahy, and Sara Geenen. 2016. "Artisanal Frontier Mining of Gold in Africa: Labour Transformation in Tanzania and the Democratic Republic of Congo." *African Affairs* 115, no. 459: 296–317.
- Buraye, Janvier Kilosho. *Industrialisation et traçabilité minières au Sud-Kivu: quel avenir pour les exploitants miniers artisanaux?* Proefschrift. 2018.
- Buss, Doris, Blair Rutherford, Jennifer Hinton, Jennifer Stewart, Joanne Lebert, Gisèle Eva Côté, Abby Sebina-Zziwa, Richard Kibombo, and Frederick Kisekka. 2017. "Gender and Artisanal and Small-Scale Mining in Central and East Africa: Barriers and Benefits." Institute for the Study of International Development.
- CASM (Communities and Small-scale Mining). 2007. "Briefing Note: Artisanal Mining in the Democratic Republic of Congo". CASM
- Chambre des Mines. 2016. "Industrie Minière En RDC - Rapport Annuel 2015." Chambre des Mines, Fédération des entreprises du Congo (FEC).
- Côté, Gisèle Eva. 2014. "Women in the Artisanal Gold Mining Sector in the Democratic Republic of Congo." Ottawa: Partnership Africa Canada.
- CTCPM (Cellule Technique de Coordination et de Planification Minière). 2018. "Bulletin Statistiques Minières Exercice 2017." Ministère des Mines.

- De Brier, Guillaume, Angela Jorns, Markus Geray, and Alexandre Jaillon. 2020. "How Much Does a Miner Earn? Assessment of Miner's Revenue and Basic Needs Study in the DRC." Antwerp: IPIS, Levin Sources, Fairphone.
- De Haan, Jorden, and Sara Geenen. 2015. "Mining Cooperatives in South Kivu: Saviour or Extortionist?" Analysis & Policy Brief n° 14 University of Antwerp.
- . 2016. "Mining Cooperatives in Eastern DRC The Interplay between Historical Power Relations and Formal Institutions." *The Extractive Industries and Society* 3, no. 3: 823–31.
- EURAC (Réseau Européen pour l'Afrique Centrale). 2017. "Mesures d'accompagnement au Règlement de l'UE sur l'approvisionnement responsable en minerais pour un renforcement de la gouvernance." Available at https://www.eurac-network.org/sites/default/files/fr_web_brochure_reglement_minerais_march_2017_-_final_0.pdf
- Extractive Industry Transparency Initiative (EITI). 2020. "Democratic Republic of Congo Overview." Available at <https://eiti.org/democratic-republic-of-congo> , accessed September 6, 2020.
- Faber, Benjamin, Benjamin Krause, and Raul Sanchez De La Sierra. 2017. "Artisanal Mining, Livelihoods, and Child Labor in the Cobalt Supply Chain of the Democratic Republic of Congo." Center for Effective Global Action. University of California Berkeley.
- Garrett, Nicolas. 2007. "The Extractive Industries Transparency Initiative (EITI) & Artisanal and Small-Scale Mining (ASM). Preliminary observations from the Democratic Republic of the Congo (DRC)." Available at https://eiti.org/files/documents/Garrett_EITI_10_2007.pdf
- Geenen, Sara. 2012. "A Dangerous Bet: The Challenges of Formalizing Artisanal Mining in the Democratic Republic of Congo." *Resources Policy* 37, no. 3: 322–30.
- Geenen, Sara, and Stefaan Marysse. 2008. "La fin des diamants du sang... un futur brillant pour les diamants du congo?" *l'afrique des grands lacs annuaire 2007–2008*: 331–55. <https://www.semanticscholar.org/paper/La-fin-des-diamants-du-sang...%3A-un-futur-brillant-Geenen-Marysse/2e0f3859b3f9099623511c7fe5f2160c0624fa01>
- Geenen, Sara, and Stefaan Marysse. 2015. "Democratic Republic of the Congo: Mining Sector." In Günter Tiess, Tapan Majumder, and Peter Cameron, eds. *Encyclopedia of Mineral and Energy Policy* Berlin, Heidelberg: Springer Berlin Heidelberg. Available at http://link.springer.com/10.1007/978-3-642-40871-7_112-1 , accessed May 6, 2020.
- Geenen, Sara, and Ben Radley. 2014. "In the Face of Reform: What Future for ASM in the Eastern DRC?" *Futures* 62: 58–66.
- Global Witness. 2004. "Same Old Story – A Background Study on Natural Resources in the Democratic Republic of Congo." Global Witness.
- Hayes, Karen, and Rachel Perks. 2012. "Women in the Artisanal and Small-Scale Mining Sector of the Democratic Republic of the Congo." *High-Value Natural Resources and Peacebuilding*, High-Value Natural Resources and Peacebuilding London.
- Hinton, Jennifer. 2016. "The Gender Dimensions of Tin, Tantalum and Tungsten Mining in the Great Lakes Region." Gender Resource Facility.

- Hönke, Jana. 2010. "New Political Topographies. Mining Companies and Indirect Discharge in Southern Katanga (DRC)." *Politique Africaine* 120, no. 4: 105.
- IMPACT. 2018. "Just Gold, Bringing Responsible and Conflict-Free Gold from Artisanal Mines to International Markets." IMPACT.
- IPIS. 2014. "Mineral Supply Chains and Conflict Links in Eastern Democratic Republic of Congo Five Years of Implementing Supply Chain Due Diligence." *Responsible Business Conduct*, OECD.
- . 2016 "Analysis of the interactive map of artisanal mining areas in eastern DR Congo, 2015 Update." Antwerp: IPIS. At https://ipisresearch.be/wp-content/uploads/2016/10/Analysis-and-map-artisanal-mining-DR-Congo_v005-1.pdf
- . 2019. "IPIS Insights on Due Diligence in Mineral Sourcing Regulating Responsible Sourcing of 3TG Minerals. Comparative Analysis of Section 1502 of the US Dodd-Frank Act and the EU Conflict Minerals Regulation, Lessons Learned and Risks for Implementation." Antwerp: IPIS.
- . 2020. "IPIS Briefing March 2020 – Cobalt: Concerns over Child Labour in Artisanal Mining should not overshadow the corruption in Large Scale Mining" available at <https://ipisresearch.be/weekly-briefing/ipis-briefing-march-2020-cobalt-concerns-child-labour-artisanal-mining-not-overshadow-corruption-large-scale-mining/> , accessed September 6, 2020.
- IPIS, and SaveActMine. 2016. "Coloured Gemstones in Eastern DRC: Tourmaline Exploitation and Trade in the Kivus." Antwerp: IPIS & SaveActMine.
- Integrated Food Security Phase Classification. 2020. "Democratic Republic of the Congo (DRC): Acute Food Insecurity Situation." Available at <http://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1152131/?iso3=COD> , accessed May 6, 2020.
- Kara, Siddharth. 2018 "Is your phone tainted by the misery of the 35,000 children in Congo's mines". *The Guardian*. Available at <https://www.theguardian.com/global-development/2018/oct/12/phone-misery-children-congo-cobalt-mines-drc>
- Karaki, Karim. 2018. "Ecdpm's Making policies work Summary Artisanal gold mining in DRC: time to get down to earth". Retrieved from www.ecdpm.org/dp223 Available at <https://ecdpm.org/wp-content/uploads/DP-223-Artisanal-gold-mining-in-DRC.pdf>
- KPMG. 2014. "Democratic Republic of Congo Country mining guide Strategy Series." KPMG
- Lahiri-Dutt, K. 2011. "Gendering the Field: Towards Sustainable Livelihoods for Mining Communities." At https://doi.org/10.26530/oopen_459251
- Marysse, Stefaan, and Claudine Tshimanga Mbuyi. 2013. "La Renaissance Spectaculaire Du Secteur Minier En RDC: Où va La Rente Minière?": 35.
- Matthysen, Ken, Steven Spittaels, and Peer Schouten. 2019. "Mapping Artisanal Mining Areas and Mineral Supply Chains in Eastern DR Congo - Impact of Armed Interference & Responsible Sourcing." Antwerp: IPIS & Danish Institute for International Studies (DIIS).
- Ministry of Mines. 2018 "Rapport sur l'organisation et le fonctionnement du Ministère des Mines." At http://congominer.org/system/attachments/assets/000/000/904/original/Audit_du_Cadre_Institutionnel_et_Organisationnel_regissant_le_secteur_minier_en_RDC.pdf?1446814592

- Ndaywel è Nziem, I., Théophile Obenga, and Pierre Salmon. 1998. *Histoire Générale Du Congo: De l'héritage Ancien à La République Démocratique*. Bruxelles: Duculot : De Boeck & Larsier : Afrique-Editions.
- Neuman, Martin, Bali Barume, Benoît Ducellier, Alain Ombeni, Uwe Näher, Philip Schütte, Ulrike von Baggehufwudt, Désirée Ruppen, and Yannick Weyns. 2019. "Traceability in Artisanal Gold Supply Chains in the Democratic Republic of the Congo Lessons - Learned from the Kampene Gold Pilot Project." Hannover: Bundesanstalt für Geowissenschaften und Rohsto (BGR).
- Nkuba, Bossissi, Lieven Bervoets, and Sara Geenen. 2019. "Invisible and Ignored? Local Perspectives on Mercury in Congolese Gold Mining." *Journal of Cleaner Production* 221: 795–804.
- OECD (Organization for Economic Co-operation and Development). 2019. "Interconnected Supply Chains: A Comprehensive Look at Due Diligence Challenges and Opportunities Sourcing Cobalt and Copper from the Democratic Republic of the Congo." OECD.
- Pact. 2010. "PROMINES Study - Artisanal Mining in the Democratic Republic of Congo." Pact.
- Partnership Africa Canada & CENADEP. 2007. "Diamond Industry Annual Review - Democratic Republic of Congo." Ottawa: Partnership Africa Canada & Centre National d'Appui au Développement et à la Participation Populaire (CENADEP).
- Perks, Rachel, and Koen Vlassenroot. 2010. "From Discourse to Practice: A Sharper Perspective on the Relationship between Minerals and Violence in DR Congo." *The Complexity of Resource Governance in a Context of State Fragility: The Case of Eastern DRC* International Alert & IPIS.
- Perks, Rachel. 2011. "Can I Go? Exiting the Artisanal Mining Sector in the Democratic Republic of Congo." *Journal of International Development* 23(8), 1115–1127. doi:10.1002/jid.1835.
- . 2011. "Towards a Post-conflict Transition: Women and Artisanal Mining in the Democratic Republic of Congo." In *Gendering the Field: Towards Sustainable Livelihoods for Mining Communities*, edited by Kuntala Lahiri-Dutt, 177–196.
- . 2012. "How can public-private partnerships contribute to security and human rights policy and practice in the extractive industries? A case study of The Democratic Republic of Congo (DRC)." *Resources Policy*.
- PROMINES (Projet d'Appui au Secteur Minier). 2014. "Rapport final sur l'Évaluation Stratégique Environnementale et Sociale Sectorielle (ESESS) du secteur minier en RDC République Démocratique du Congo" Available at <http://www.prominesrdc.cd/fr/Rapport/sofreco.pdf>
- . 2016. "Plan Stratégique de Développement Du Secteur Minier (2016-2021)." Rapport R-1 Kinshasa: PROMINES, World Bank, Ministry of Mines.
- Rubbers, Benjamin. B. 2019. "Mining Boom, Labour Market Segmentation and Social Inequality in the Congolese Copperbelt." *Development and Change*. Available at <https://doi.org/10.1111/dech.12531>
- Singo, Patience, and Kady Seguin. 2018. "Best Practices: Formalization and Due Diligence in Artisanal and Small-Scale Mining." IMPACT.

- Tsurukawa, Nicolas, Siddharth Prakash, and Andreas Manhart. 2011. "Social Impacts of Artisanal Cobalt Mining in Katanga, Democratic Republic of Congo." Öko-Institut EV - Institute for Applied Ecology, Freiburg, 65. Available at http://resourcefever.com/publications/reports/OEKO_2011_cobalt_mining_congo.pdf from
- UN (United Nations). 2007 "Report of the Secretary-General pursuant to paragraph 8 of resolution 1698 (2006) concerning the Democratic Republic of Congo S/2007/68", UN Security Council.
- UNDP (United Nations Development Programme). 2019. "Inequalities in Human Development in the 21st Century Briefing Note for Countries on the 2019 Human Development Report: Congo (Democratic Republic of)." UNEP.
- United Nations Group of Experts. 2019. "Final Report of the Group of Experts on the Democratic Republic of the Congo." S/2019/469 Group of Experts on the Democratic Republic of Congo.
- Vogel, Christoph, and Josaphat Musamba. 2017. "Brokers of Crisis: The Everyday Uncertainty of Eastern Congo's Mineral Négociants." *The Journal of Modern African Studies* 55, no. 4: 567–92.
- Vogel, Christoph, Josaphat Musamba, and Ben Radley. 2018. "A Miner's Canary in Eastern Congo: Formalization of Artisanal 3T Mining and Precarious Livelihoods in South Kivu." *The Extractive Industries and Society* 5, no. 1: 73–80.
- Weyns, Yannick, Lotte Hoex, and Ken Matthysen. 2016. "Analysis of the Interactive Map of Artisanal Mining Areas in Eastern DR Congo - 2015 Update." Antwerp: IPIS.
- World Bank. 2008. "Democratic Republic of Congo Growth with Governance in the Mining Sector." 43402-ZR World Bank.
- . 2017. "Stories of Women in DRC's Mining Sector Spark National Action Plan." Available at <https://www.worldbank.org/en/news/feature/2017/10/25/in-the-drc-stories-of-women-in-the-mining-sector-spark-national-action-plan>, accessed September 6, 2020.
- Yager, Thomas R. 2019. "The Mineral Industry of Congo (Kinshasa)." 2015 Minerals Yearbook United States Geological Survey (USGS).