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MARKET ANALYSIS: ARTISANAL AND SMALL-SCALE MINING (ASM) GOLD FROM EASTERN DRC

USAID-funded Commercially-Viable and Conflict-Free Gold Program (CVCFG) Cooperative Agreement No. 72066018CA00004

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ABBREVIATIONS AND ACRONYMS

3T	Tin, tungsten and tantalum
3TG	Tin, tungsten, tantalum and gold
AGC	Artisanal Gold Council
ASGM	Artisanal and small-scale gold mining
ASM	Artisanal and small-scale mining
ATM	Automated teller machine
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe (Federal Institute for Geosciences and Natural Resources, Germany)
BIVAC	Bureau of Inspection, Valuation, Assessment and Control
CAHRA	Conflict-affected and high-risk area
CBRMT	Capacity Building for Responsible Minerals Trade (USAID)
CEEC	Le Centre d'Evaluation, d'Expertise et de Certification des substances minérales précieuses et sémi-précieuses
CoP	Code of Practice
CRAFT	Code of Risk-mitigation for ASM engaging in Formal Trade
CSR	Corporate social responsibility
CTC	Certified Trading Chains
CVCFG	Commercially Viable and Conflict-Free Gold (USAID)
DGD	Dubai Good Delivery Standard
DMCC	Dubai Multi Commodities Centre
DRC	The Democratic Republic of Congo
FERI	Fiche Electronique de Renseignement à l'Importation
GoTS	GoldTrace Solution
ICGLR	International Conference on the Great Lakes Region
ICMM	International Council on Mining and Metals
ICT	Information and communication technology
IPIS	International Peace Information Service
ITOA	Initiative de Traçabilité de l'Or d'Exploitation Artisanale
KYC	Know Your Counterparty/Customer
LBMA	London Bullion Market Association
LPMCL	London Precious Metal Clearing Limited
LSM	Large-scale mining
MACDESA	Minera Aurífera Cuatro de Enero S.A. (Mining company, Peru)
MGM	Mongbwalu Gold Mine
NASA	National Aeronautics and Space Administration
NGO	Non-governmental organization
OECD	Organisation for Economic Cooperation and Development
OECD DDG	OECD Due Diligence Guidance for Responsible supply Chains of Minerals from Conflict-Affected and High-Risk Areas
OFIDA	Office des Douanes et Assises (Customs Authority, DRC)
PEA	Political economy analysis
RAGS Forum	Responsible Artisanal Gold Solutions Forum
RCM	Regional Certification Mechanism
RJC	Responsible Jewellery Council

RJC CoP	Responsible Jewellery Council Code of Practice
RMAP	Responsible Minerals Assurance Process
RMI	Responsible Minerals Initiative
SDGs	UN Sustainable Development Goals
SMEs	Small and medium-sized enterprises
SOKIMO	Société de Minière de Kilo-Moto SA
STRADE	Strategic Dialogue on Sustainable Raw Materials for Europe
RINR	The Regional Initiative against the Illegal Exploitation of National Resources (ICGLR)
WFTO	World Fair Trade Organization
WGC	World Gold Council
WTO	World Trade Organization
ZEA	Zone d'Exploitation Artisanale

EXECUTIVE SUMMARY

The Commercially Viable Conflict Free Gold (CVCFG) Project, an artisanal mining initiative funded by the United States Agency for International Development (USAID), aims to establish a conflict-free artisanal and small-scale mining (ASM) gold supply chain originating from eastern Democratic Republic of the Congo (DRC). The program is being implemented by Global Communities in partnership with Levin Sources. It aims to contribute to the broader US government goal of reducing instability in the DRC by providing commercial opportunities to artisanal miners by linking them to responsible gold buyers in international markets or by strengthening local partnerships between ASM suppliers and established institutional investors/anchor institutions within the DRC. The 3 primary objectives of the program are to:

1) Increase co-investment in conflict-free traceable ASM gold from eastern DRC
2) Increase exports of conflict-free, traceable ASM gold from eastern DRC
3) Improve the commercial viability of ASM gold cooperatives

To achieve the project's vision of a commercially viable, self-sustaining and responsible ASM gold supply chain, it is essential that its strategy and activities are responsive to the reality of the market. Therefore, this first phase of market analysis examines the demand for ASM gold generally, and from the DRC specifically, to establish a baseline of knowledge, attitudes and behaviors of ASM gold buyers and other market actors. It also identifies barriers and potential solutions for increasing investment and trade. It maps the ASM gold supply chain, locating key market system actors. It assesses their requirements and what needs to be done to incentivize them to mine, trade and source gold responsibly.

KEY FINDINGS

1) In a crowded marketplace, the story of responsible gold from the DRC must be unique, compelling and robust. It must draw in actors who are prepared to partner with the project and who are prepared to manage the risks and conduct business in ASM gold from the DRC responsibly in the future. This means **articulating a clear, distinct vision for conflict-free and responsible gold**.

2) The mid-downstream market demands robust risk mitigation and management, in compliance with sector standards, to support trade in responsible ASM gold. Being clear about the **program's approach to due diligence** (and criteria for inclusion in the program) and what supply chain actors need to do to be due diligence-ready for the market will help address this.

3) The industry is set up to work with existing standards and needs early clarity on which requirements and standards are to be applied. The research suggests that **the Code of Risk-mitigation for ASM engaging in Formal Trade (CRAFT)** could be the most appropriate to support due diligence implementation in the ASM gold supply chain. The code promotes a progressive improvement approach and covers some risks beyond OECD Due Diligence Guidance Annex II, in line with expectations of a section of the market.

4) To engage quickly, the mid-downstream market needs a detailed and ongoing understanding of the **upstream market and supply chain**. This would need to identify the needs and expectations of ASM gold communities, miners and traders, and the barriers they face.

5) The mid-downstream market needs to be involved in judging the feasibility and desirability of the most appropriate **supply chain model** to ensure it will ultimately be commercially viable. Phase 2 of the research will explore the incentives necessary to encourage stakeholders to participate in the supply chain.

6) A **multi-stakeholder approach** is essential to improve transparency, build trust and help link the upstream supply chain with mid- and downstream actors who are incentivized to work with and invest in a responsible gold market.

7) **Strong linkages between upstream and midstream supply chains** will guarantee that feedback from market actors is integrated into the upstream supply chain development on an ongoing basis. It is important that activities are steered by the entire market system that functions from mine to consumer, rather than in isolated silos.

8) Given the challenges in eastern DRC, stakeholders and supply chain actors need to sign up to **continual improvement** of a system that can deliver an increasingly commercially viable supply of gold. This necessitates continuous monitoring, evaluation and learning and a clear feedback loop between the program, the government of the DRC and the market systems actors.

Table 1: Summary of barriers to trading ASM gold from the DRC

	Upstream	Midstream	Downstream
Barriers to trading ASM gold from the DRC:	Governance and formalization Access to finance and credit Role of cooperatives Traceability and chain of custody Production challenges Gold as a financial instrument Trust-based industry	Lack of certified ASM sources Reputational risk Cost of logistics and security Lack of will by exporters to complete due diligence obligations Payment methods	Financial and commercial viability Supply and product variety Market competition and mixed supply of ASM gold provenances Risk management and due diligence

1 - INTRODUCTION

This market analysis has been the primary activity delivered by Levin Sources during the first year of the USAID-funded Commercially Viable and Conflict-Free Gold (CVCFG) program. It supports project objective 1: increasing demand for and co-investment in responsible artisanal and small-scale mined (ASM) gold from eastern DRC. This market analysis will help to inform the strategic direction of the project with respect to private sector engagement, co-investment and market development for ASM gold from eastern DRC. Further details on future phases of research are covered in the section on scope. The market analysis will continue over the life of the project, informing the implementation of the overall program, the market linkages strategy and marketing campaigns for conflict-free, responsible ASM gold from the DRC.

OBJECTIVES OF THE MARKET ANALYSIS

The ASM gold market analysis, with a specific focus on the DRC, shall provide information on the current market actors' interests and the structural and perceived challenges and drivers of trading and/or investing in ASM gold, and specifically ASM gold originating from eastern DRC. As well as reviewing the demand for ASM gold, this report includes a broader analysis of the ASM gold supply chain to define the broader market system and define motivations and barriers at the different stages of gold extraction, trade, sourcing and investment. The key objectives of the market analysis are summarized below.

1. **Mapping the ASM gold supply chain from the DRC**

The market analysis looks into the full supply chain, from mine to consumer, to identify the key market actors, how the supply chain works and which inter-connections and roles have to be taken into account when trying to build a commercially viable, conflict-free and responsible supply chain from eastern DRC.

2. **Profile the current market demand for ASM gold**

An assessment of the current demand for ASM gold globally, as well as from the DRC specifically, to better identify the factors that contribute to refiners, jewelers and potentially other buyers procuring ASM gold.

3. **Identify motivations and barriers (i.e. trade, financial and market) to sourcing ASM gold from eastern DRC and explore existing solutions**

Research into motivations and barriers that currently, or that could potentially, sustain or diminish demand for ASM gold from eastern DRC. This provides insight into the barriers that need to be addressed in order to set up a successful and commercially viable supply chain, and also identifies the factors which can be leveraged as motivators for the different supply chain actors. The next phase of this market analysis includes a deep dive into market failures, which will lead to a more detailed interpretation of these barriers and will focus on identifying solutions that are either already in place or could be developed through the engagement of relevant market actors.

4. **Inform the private sector engagement and marketing strategy of the project and set the context for engaging market actors and stakeholders to implement solutions**

This includes engagement with private sector and other relevant stakeholders to raise awareness of the project and collect information on market demand, current behavior and attitudes towards ASM gold.

The market analysis will enable the CVCFG program to better profile and identify supply chain actors and private sector partners to engage in the creation of a commercially viable, conflict-free and responsible ASM gold supply chain. The program needs to work with partners to support and build solutions for trade, sourcing and investment in ASM gold.

SCOPE AND METHODOLOGY

PHASE 1

The first phase of the market analysis mapped the ASM gold supply chain, based on desk research, and started the engagement with companies in the downstream (jewelers) and midstream (refiners). Over the final months, the research team leveraged its network in Europe to interview companies, using its connections with jewelry sector associations and initiatives such as the National Association of Jewelers and Fair Luxury in the UK to expand its list of potential stakeholders. The team also interviewed refiners in Europe and began interviews with those in the Middle East.

The table 1 illustrates the supply chain stages researched and the stakeholders interviewed.

Table 2: ASGM Supply chain tiers and market actors researched and/or engaged.

SUPPLY CHAIN TIER	SUPPLY CHAIN STAGES (GEOGRAPHY)			
	1	2	3	4
UPSTREAM	ASM	Local Traders	Larger Traders and Exporters/Comptoirs	
MIDSTREAM	Transport and Logistics	**Refiners** (Germany, Italy, Spain, Switzerland, Turkey, United Arab Emirates)	Bullion and Metal Traders	
DOWNSTREAM	**Manufacturers** (UK with international business)	**Jewelers** (France, Germany, Italy, Switzerland, UK)	Financial Services	Technology

Key to the table:

- *Dark blue: both desk research and stakeholder interviews*
- *Light blue: desk research only. Stakeholder interviews will be covered in the next phase of the market analysis*
- *Light grey: will be covered during the next phase of the market analysis*

In addition to refiners and jewelers who represented the focus for stakeholder engagement, the following groups were also interviewed, and the outcomes have informed the market analysis throughout.

- Independent consultants working in minerals supply chains
- Financial services (bank)
- Electronics
- ASM supply chain initiatives
- Trader (initial engagement with Fair Congo)

Each engagement was guided by the following high-level questions. Detailed questionnaires are available upon request.

1. How is responsible ASM gold defined?

2. What is the ASM gold supply chain in the DRC?
3. Who are the stakeholders that are already playing a role in the ASM gold supply chains (globally and in the DRC) and should be involved further?
4. What are existing, potential and target markets for ASM gold from the DRC?
5. What are the market and financial barriers for ASM gold from the DRC?
6. Are there existing or potential solutions to address these barriers?

While all references are anonymized, Levin Sources holds a full record of engaged organizations, interview notes and contacts to organize potential follow up and further engagement.

PHASE 2 AND FUTURE MARKET ANALYSIS

Building on the findings of phase one of the market analysis, future phases will:

- Expand the engagement of jewelers and refiners in Europe, as well as in new locations. Geographies under considerations are the U.S., India and the Middle East.
- Consider expanding research into other markets such as electronics and aerospace.
- Carry out a broader assessment of the upstream supply chain in cooperation with Global Communities to better understand the barriers identified in this first report. This will include stakeholder mapping, interviews and analysis.
- Engage transport, logistic and security companies to profile their role in the supply chain, understand existing barriers and identify companies interested in exploring and testing solutions.
- Research barriers to ASM gold supply chain financing to understand the needs of the different actors along the supply chain and detail which role financial institutions could play.
- Organize action-oriented meetings with the jewelers and refiners interviewed during phase one, who have expressed an interest in engaging with the program, to identify what the avenues for cooperation and mutual value add might be. These should focus on breaking down the barriers identified and initially scoping potential solutions.

STRUCTURE OF REPORT

This report is set out in 6 chapters. The second chapter, **artisanal and small-scale gold mining (ASGM) supply chain overview** provides an introduction to the ASGM supply chain, including its stages and key market actors. **The upstream supply chain** chapter then analyses the ASGM gold supply chain in the DRC, from mine to exporters, describing the relevant stakeholders, institutions and barriers related to the responsible trade of ASM gold from the DRC. The **midstream supply chain** chapter includes a detailed analysis of the refining sector and the impact of its compliance requirements on sourcing decisions. **The downstream supply chain** chapter presents details of the engagement with the jewelry sector and offers insights on its attitudes towards sourcing ASM gold. The next chapter, on **lessons learnt from other initiatives**, looks at guidelines, standards and ASM gold initiatives and explores lessons that can inform the implementation of the CVCFG program. Finally, the last chapter, covering **conclusions, key findings and recommendations for CVCFG,** details the key outcomes of the market analysis so far and highlights actionable and strategic considerations that the CVCFG project consortium should address.

2 - ASGM SUPPLY CHAIN OVERVIEW

This chapter gives a general overview of ASGM supply chains from the DRC to global markets and includes information on the different supply chain market actors relevant to CVCFG.

The DRC is a country of significant mineral wealth, including globally significant deposits of gold. Estimates from the International Peace Information Service (IPIS) in 2016 state that artisanal hard-rock gold production amounts to approximately 12 tons per year, representing a third of the official gold production in the DRC.[1] Although there is also significant production from artisanal gold alluvial operations, there are no reliable figures available.[2] Estimates from 2016 suggest that there are at least 200,000 ASM gold workers in eastern DRC, which is 5 times the number of artisanal miners working in the 3T sector.[3]

More than 90% of the DRC's artisanal gold is reported to be informally or illegally mined and between 95% and 98% is estimated to be smuggled out of the country through the eastern neighboring states to Dubai, where it is refined.[4] Only 1% to 2% of extracted gold seems to be officially declared as exported.[5] ASGM normally occurs in rural areas where access to cash is limited, and where gold also fulfils the function of a parallel currency.[6] Local traders usually buy gold directly from artisanal miners or occasionally use the mine owner as intermediary.[7] Both mine owners and traders usually act as local creditors for ASGM.[8] The ASGM-associated supply chain (trading intermediaries and gold buying centers) reportedly also often operate illegally or informally.[9] Local traders normally sell their gold to a larger trading counterpart, who then sells it on to national gold traders and exporters (comptoirs).[10] This chain of intermediary traders can be quite complex and opaque. Most of the ASM gold supply chains currently in the DRC are reported to have Dubai, India and China as destination markets.[11] Figure 1 below shows a simplified graphic representation of a typical informal ASM supply chain from the DRC.

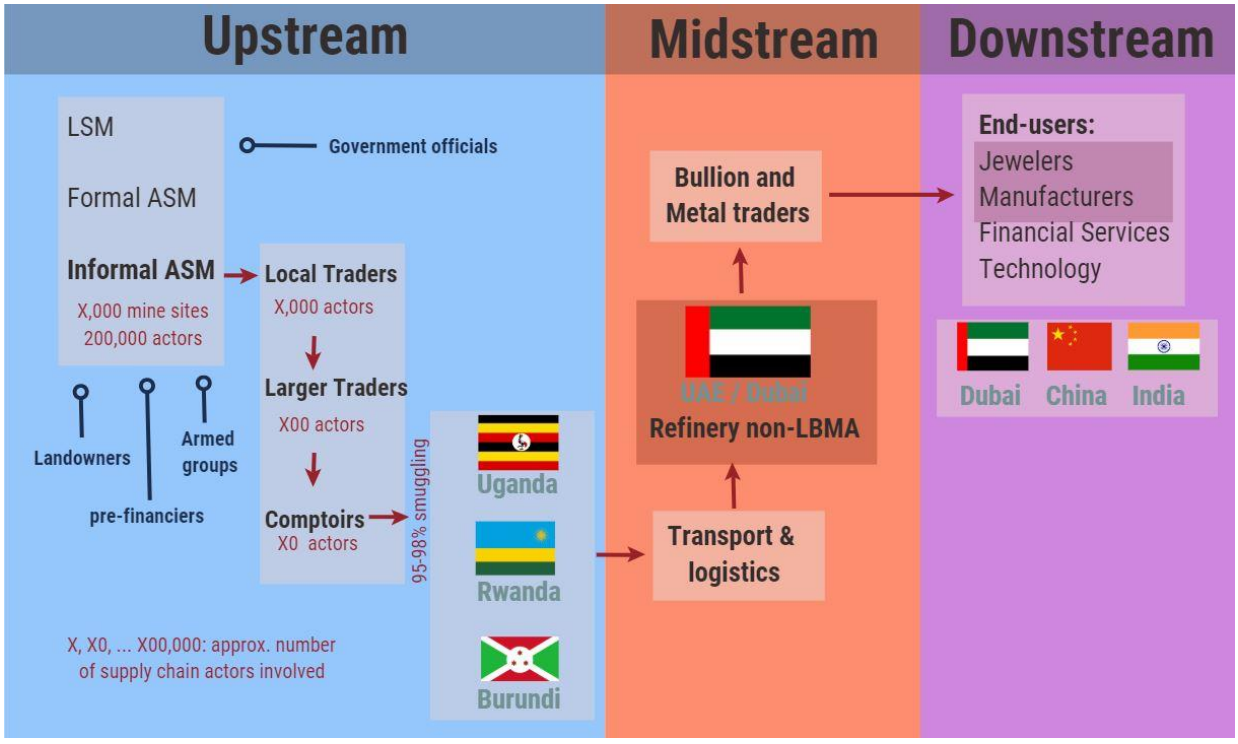


Figure 1 Supply chain diagram modified after Hruschkra et al, 2016[12] and PPA, 2019[13].

3 - THE UPSTREAM SUPPLY CHAIN

This chapter provides an analysis of the upstream supply chain and market in the DRC, from ASM gold mines to exporters (comptoirs). It describes the actors involved, assesses the risks and barriers related to responsible sourcing in these upstream tiers, and establishes initial findings regarding potential supply chain partners for CVCFG.

BACKGROUND AND OVERVIEW OF ACTORS INVOLVED

High-grade gold mineralization is found mainly in the east of the DRC.[14] This area contains widespread alluvial deposits as well as primary gold occurrences, which are operated by large-scale or small-scale mines, mainly in the provinces of South Kivu, North Kivu, Ituri, Haut Uele, Tshopo, Maniema and Tanganyika (see Figure 2).[15] Although large-scale mining operations produce more gold in the DRC, artisanal and small-scale gold mining (ASGM) has dramatically expanded in recent years, mainly due to the increase in gold prices.[16]

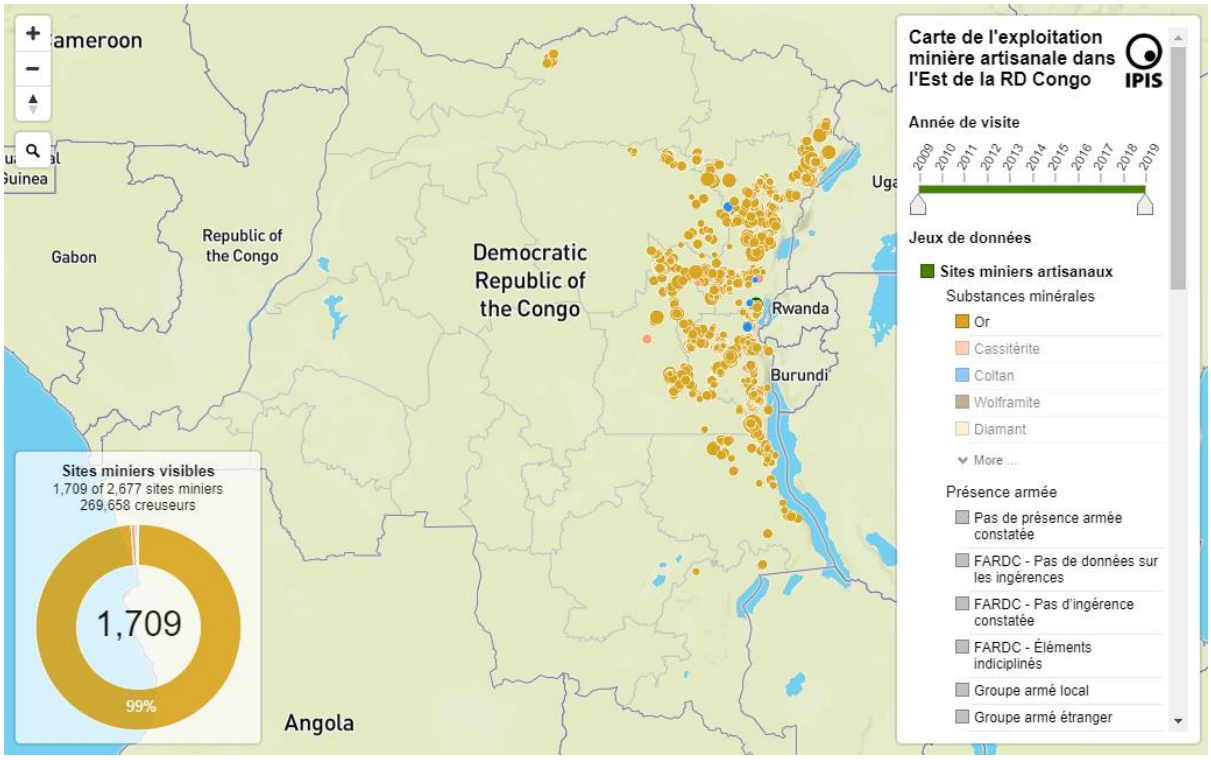


Figure 2 Map showing the regions in the DRC where gold is mined by ASM, from IPIS, 2019

The upstream supply chain involves a wide range of actors who have a specific role to play and add value within the supply chain. **Understanding the role and function of each specific actor, as well as the opportunities and challenges they face regarding responsible sourcing, is crucial for CVCFG if it is to engage with these actors, manage markets' expectations, realize market potential and bring them into a responsible supply chain program.** The diagram in Annex I summarizes upstream actors including some initial illustration of gold, financial, fees and taxes flows.

REGULATORY REQUIREMENTS

ASGM in the DRC is governed by a suite of regulations that are only occasionally implemented.[17] As a member state of the ICGLR, the DRC has committed to implementing the ICGLR Regional

Certification Mechanism (RCM) through national regulation. The RCM is one of the 4 tools of the ICGLR's Regional Initiative against the Illegal Exploitation of Natural Resources (RINR); the other 3 tools are the Regional Database, the Independent Mineral Certification Auditor, and the Audit Committee. The RCM is a certification system designed to assure that gold, tin, tantalum and tungsten mineral chains do not contribute to conflict or to serious human rights violations.[18] It first entered into force in 2011. It has recently undergone an extensive revision process which was universally approved by the ICGLR regional committee on the October 2, 2019. The RCM verifies the upstream mineral chain from the mine site, through the chain of custody, to the export of certified mineral lots by conformant exporters. There are 2 principal points of verification: (1) the mine site, which is subject to periodic mine site inspections by government, and (2) exporters, which must undergo periodic audits as a condition of trading. The audits are to be carried out by ICGLR accredited auditors. The assessments are based on performance criteria that are aligned with, or go beyond, the requirements of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. The revised RCM will use a color-coding system to demonstrate levels of conformance (Blue, Green, Yellow, Red). In addition, exporters are required to demonstrate proof of origin for each mineral lot by documenting the chain of custody and to obtain a certificate for each mineral lot they export from *Le Centre d'Evaluation, d'Expertise et de Certification des substances minérales précieuses et sémi-précieuses* (CEEC). Despite some progress, the efficacity of the system has been severely restricted by the limited implementation capacity of member states. The DRC and Rwanda are regarded as having made the most significant steps towards effective implementation, especially in the 3Ts sector. However significant challenges remain in establishing the system as a credible and sustainable solution to responsible sourcing for minerals from the DRC and the Great Lakes Region.

Further information on regulatory requirements for exporters is included in the sections on large traders, exporters and comptoirs.

The above information is a preliminary overview of the regulatory environment in the DRC with respect to ASM gold. Levin Sources will carry out a detailed analysis of provincial, national and regional international regulations in year 2 of the project.

GOLD MINING

ARTISANAL AND SMALL-SCALE GOLD MINING

The analysis below gives a view of ASGM sites that have been (a) assessed as 'green' under the DRC law, Certified Trading Chains (CTC), (b) reported as having no presence of armed groups, and (c) not using mercury. These criteria are relatively strict and limit the number of possible mine sites or ASGM areas considerably. As shown below, the analysis identifies the same mine sites and areas that have already been deemed suitable by other gold supply chain initiatives. CVCFG will need to move beyond those. This analysis is seen as a first attempt at defining potential mine sites to work with, but it does not represent a complete assessment or final judgement. This analysis must be extended, the criteria refined (e.g. not using them cumulatively), and backed up with evidence provided by extended field work and stakeholder engagement. Following the OECD due diligence guidance and the continuous improvement approach, sites could still be selected even if they do not meet all of the criteria, as long as it is assessed that they could ultimately meet the requirements with the support of the program.

As of April 2019, the IPIS interactive webmap covered 1,709 artisanal gold mine sites in the DRC (see Figure 2)[19]. Although the map does not yet cover all the ASGM sites in the region, it represents a starting point for the analysis.

From the 1,709 mines reported by IPIS, 95 have been surveyed by mine validation commissions to classify them as green, yellow or red. From these 95 ASGM sites, 82 were classified as green, 8 as yellow and 5 as red.[20] A green or yellow classification is required to legally export (see regulatory requirements above). However, a green flag does not guarantee the elimination of risk, as some of the green labelled mines are located inside protected areas and child labor has been reported.[21]The map in Figure 4 shows ASGM sites that have been classified as green, without the presence of armed groups, and without the use of mercury (18 sites in total). These mines are located in the provinces of Ituri (3 sites), North Kivu (3 sites), South Kivu (6 sites) and Maniema (5 sites). The sites have been grouped in 7 clusters for an easier visualization and analysis. Each mine site cluster has been rapidly analyzed using the online IPIS webmap. More detailed information on each of the 7 clusters can be found in Annex I. In order to assess which sites to engage, the CVCFG program will define clear criteria for site selection.

For formal, legal production under the regulatory framework, mines must be located in a Zone d'Exploitation Artisanale (ZEA). In fact, only 2 of those mine sites are located in a ZEA: Mbembesa, mine site in cluster 1, and Nyamurhale/Lubona, mine site in cluster 5. This means that the opportunities for engaging with already fully formalized ASGM mine sites that are operating in a ZEA, through a functioning cooperative, at a green flagged site are extremely limited. **The CVCFG program will likely have to engage at ASGM locations that may not yet have a designated ZEA, and will therefore have to engage proactively with government stakeholders to see whether and how a ZEA could be designated in the chosen locations or to validate sites in ZEA which are not yet validated**.

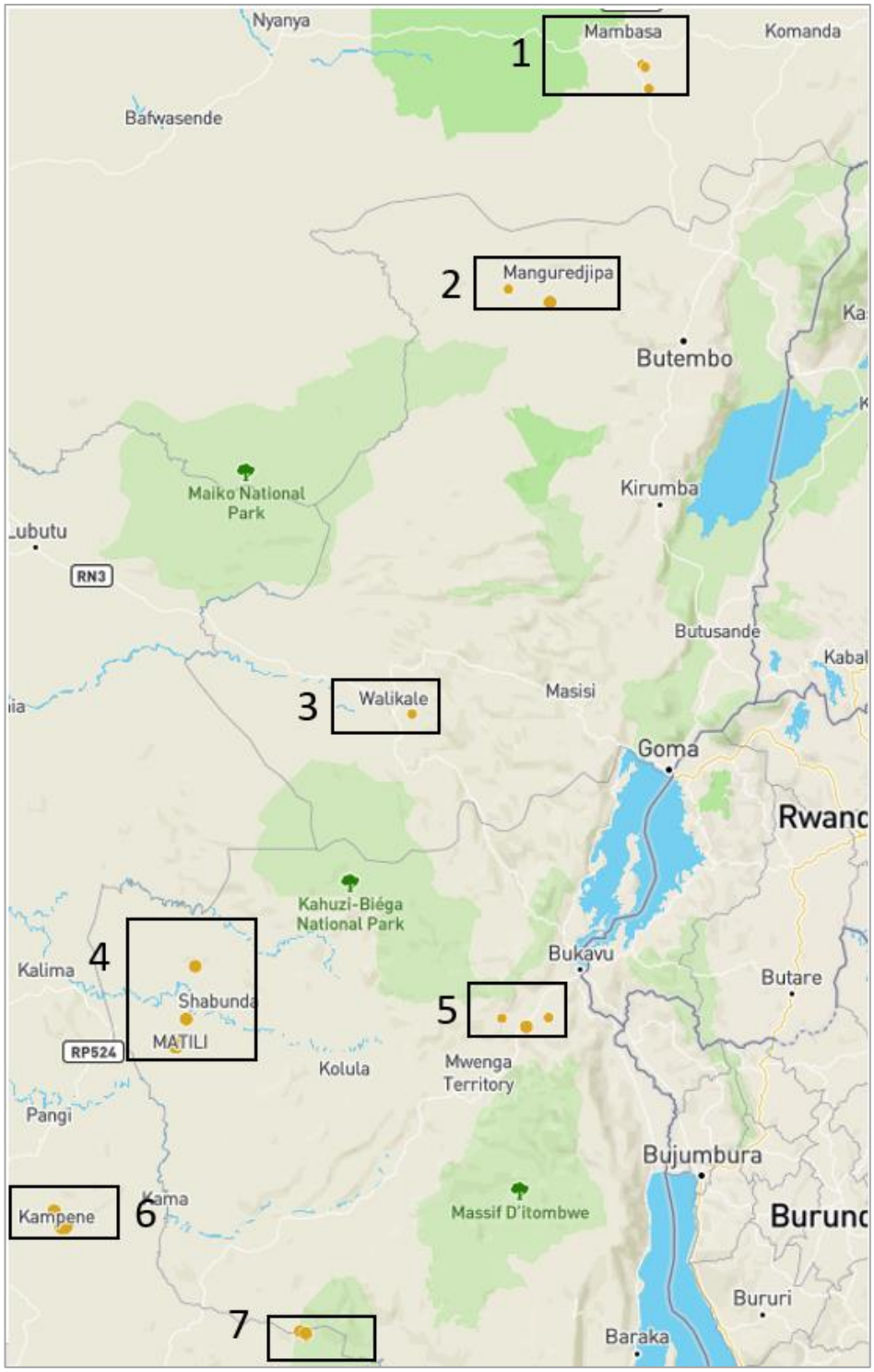


Figure 3 Map showing the ASGM sites labeled as green without armed presence and use of mercury, from IPIS, 2019

LARGE-SCALE GOLD MINING

Large-scale gold mining in the DRC is confined to relatively few operational mines at present, and the vast majority of actors remain in various stages of exploration.

The **Kibali gold mine** is one of Africa's largest gold mining operations. It is operated by Barrick and owned jointly by **Barrick, AngloGold Ashanti** and the state-owned company Société de Minière de Kilo-Moto SA (**SOKIMO**). The Kibali mine is located in Haut Uele province, near Watsa and about 220km east of the provincial capital Isiro. Kibali comprises both exploitation and exploration permits.[22] According to the DRC mining cadastre, there are existing ZEAs around Kibali's permits, though it is not possible to identify if they are active.[23]

Banro[24] has been operating 2 gold mines which are in **Namoya** (Maniema) and **Twangiza** (South Kivu). Banro also has exploration permits in Kamituga and Lugushwa (both South Kivu). There are existing ZEAs around the exploitation permits and ASM has been operating on the exploration permits as well. [25]

The Mongbwalu gold prospect, located in the 'Kilo-Moto' greenbelt around Bunia, Itrui province, is another relatively advanced large-scale project. It was sold by AngloGold to **Vector Resources** in January 2019,[26] entering a joint venture with Mongbwalu Gold Mine (MGM) and Fimosa Capital. The project is now known as **Adidi-Kanga**, and is still at the exploration phase.

There are other large-scale gold mining prospects at various stages of exploration, but not yet in production.

The following maps show large-scale gold permits (exploitation: green; exploration: blue) in relation to ZEAs (purple) and ASGM sites (yellow dots) visited by IPIS between 2009 and 2019.

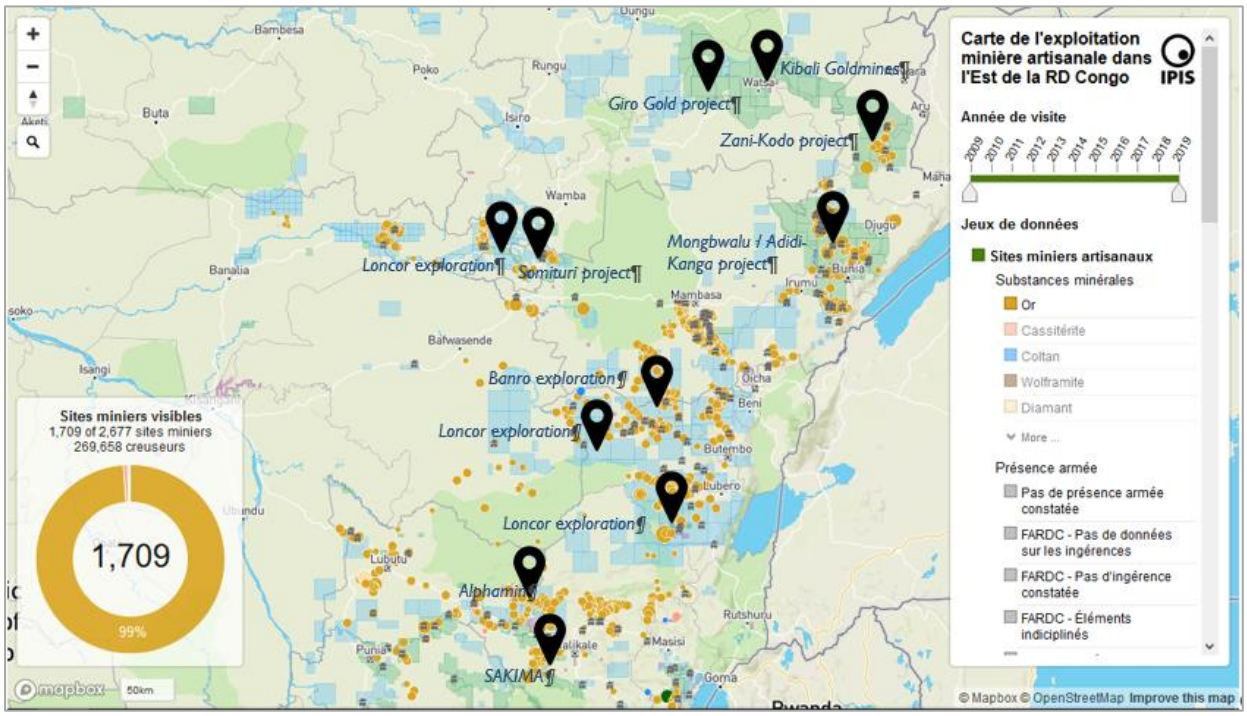


Figure 4 Map showing large scale gold permits (exploitation: green; exploration: blue) in relation to ZEAs (purple) and ASGM sites (yellow dots) visited by IPIS between 2009 and 2019.

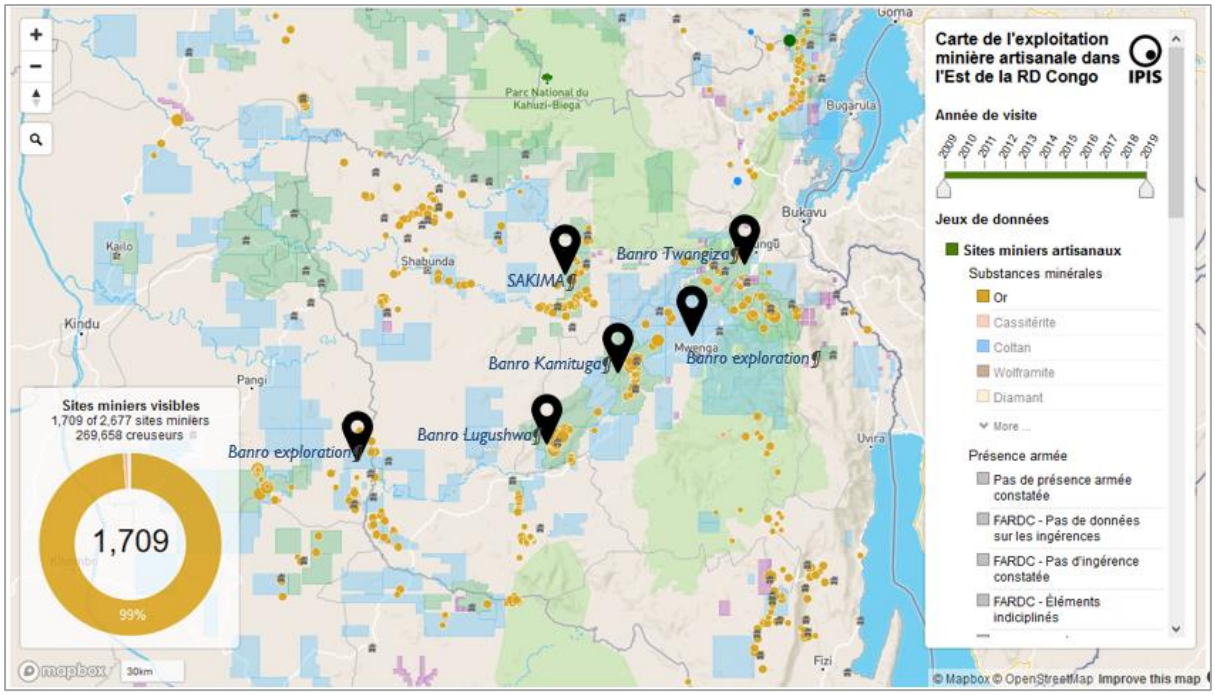


Figure 5 Map showing large scale gold permits (exploitation: green; exploration: blue) in relation to ZEAs (purple) and ASGM sites (yellow dots) visited by IPIS between 2009 and 2019.

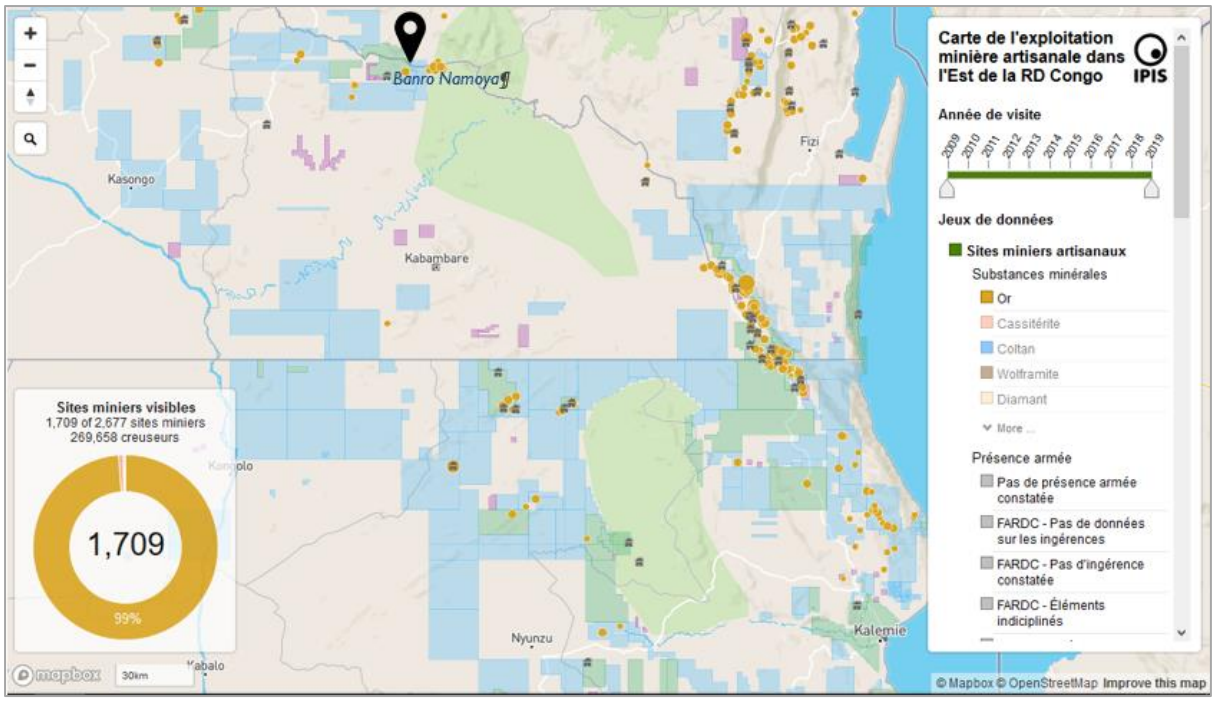


Figure 6 Map showing large scale gold permits (exploitation: green; exploration: blue) in relation to ZEAs (purple) and ASGM sites (yellow dots) visited by IPIS between 2009 and 2019.

In conclusion, the CVCFG consortium will engage with those large-scale mining (LSM) companies with production operations, or projects in advanced exploration stage to establish whether LSM operators could become partners, supporters or facilitators of commercially viable conflict-free supply chains from ASGM. These conversations should focus on those LSM companies where ZEAs already exist around their mining concessions, or where the company itself has taken proactive steps in engaging with and managing ASM communities in the past. The conversations with these operators may also

produce additional information on ASM cooperatives and dynamics as well as ASGM supply chains in their respective locations.

LOCAL TRADERS

Local traders collect gold from ASM miners and tend to accumulate volumes of around 50 grams before selling it to larger traders.[27] Because small traders buy gold from mining individuals or groups in the same site, the total number of traders can be higher than the number of mine sites.[28] The interactions of local traders and ASM are mostly based on personal relations and are defined by reciprocal social and economic relationships.[29] Local traders thus fulfil a crucial role not only in the supply chain but also for the mine workers and communities.

ASM miners normally sell small quantities of gold at the site where gold has been extracted.[30] By selling on the spot, ASM miners get cash to use for immediate consumption and they avoid the risk of waiting, accumulating gold and having to travel to the nearest city.[31] Moreover, local traders also provide credit to shaft owners and ASM miners for equipment, food, drinks, clothes etc.[32] Without the credit, mine sites would not produce as much; therefore, it is a win-win situation for the local traders and miners.[33] Because of this reciprocity, traders and miners interact repeatedly and try to personalize their relationships to reduce uncertainty.[34] In many cases, agreements are made to share profit, or to pay a monthly salary.[35]

Some local traders label the credit given to miners as a gift, although most of the time this 'gift' needs to be repaid in the form of gold and as such is really a loan. Some debts remain outstanding for a very long time (more than 10 years) .[36] Credit varies from small quantities to 100,000 USD in some cases.[37] Before granting credit, local traders must find out whether the miner normally pays his debts or not by evaluating his mining shaft and project, as well as considering the qualities of the client.[38] As a commercial strategy to attract clients, some local traders give small 'gifts' to miners that do not need to be repaid. This can include money to buy petrol for the water pump, beans to eat, branches to shore the shaft, or they become friends with the miners.[39]

Local traders set the price for the gold. Miners can argue and discuss, but in most cases, miners accept the price.[40] Trust develops over time, and once trust has been gained, that miner becomes a so-called 'honorable client'.[41] 'Honorable clients' are not asked for written agreements, as this would be considered an insult.[42] Miners can do business with other traders, as long as they respect the commitments made with each of them.[43]

Although these relationships and networks (i.e. exchanges based on trust) can be considered a way to escape state intervention, miners and traders face many challenges in becoming licit. Research by Sara Geenan found that miners and traders would be willing to pay taxes, but they complain that there is a multiplicity of taxes for which they do not see public services in return.[44] These range from taxes that are legal and formal, to taxes that are legal and formal but collected at higher rates than envisaged by the law, to informal taxes not foreseen by the law. Traders constantly move between the formal and informal, legal and illegal spheres.[45] The same paper states that local traders are reluctant to formalize because of limited trust in the state.[46] However, in some cases, they officially register to avoid trouble.[47] Moreover, the space in which traders operate is highly insecure: there is no infrastructure, banking facilities are absent, roads are poor quality and unsafe, making it difficult for traders to transport substantial amounts of money and gold.[48] Traders also prefer transporting small quantities of gold, since they can hide it in their pockets, in their cap, or in the lining of their jacket.[49]

Because of this insecure environment, traders prefer to do business only with trusted partners.[50] Although trust can be violated, it is more difficult when there is friendship involved and when traders know the miners' family members.[51] If traders decide to abscond, this would ruin their reputation and decrease their chances of working in the mining sector around that area.[52] Therefore, although all actors have incentives to cheat or oppress, these incentives are balanced by long-term relationships and mutual dependency.[53]

Many responsible gold sourcing initiatives are characterized by shorter supply chains, which in some cases means cutting out local traders (see chapter 6 and annex I). However, some other initiatives (e.g. Just Gold, Capacity Building for Responsible Minerals Trade (CBRMT)) have partnered with local traders that buy gold from miners at a fair and transparent price. Local traders and miners have a mutual dependency, not only commercial but also socio-political relationships that should be recognized, and therefore this aspect will be further analyzed in the next phase of research.

LARGE TRADERS AND EXPORTERS / COMPTOIRS

Larger traders (*négociants*) can be located in gold buying centers in larger villages, towns or cities off-site and buy gold from small traders (*les petits négociants*) either in town or by regularly travelling to mine sites.[54] In many cases large traders act as financiers of small traders and/or miners.[55] Large traders increase the purity of the gold, smelting it into a doré bar.[56] Typically, large traders accumulate 250 to 2,500 grams of doré bars before selling it to comptoirs. [57] Comptoirs, exporters and other wholesale gold traders usually buy from small or large traders with the purpose of exporting gold.[58] Comptoirs are legally entitled to also buy directly from miners.[59] As large traders, comptoirs further refine the doré prior to selling onwards.[60]

The following section looks at the regulatory and fiscal framework for exporting, but more research needs to be done into which exporters / comptoirs are operating, and where they are based, in order to identify potential comptoir / exporter partners for the CVCFG project.

The actors entitled to export minerals from the DRC are mining or quarry title holders, processing facilities and comptoirs.[61]A World Trade Organization (WTO) document also mentions organized and approved mining cooperatives as other actors that are allowed to export precious stones and precious and semi-precious metals,[62] but this needs to be further verified.

The exporter must obtain an export number from the Ministry of Foreign Trade, which has to be renewed annually.[63] All exports require a signature from an approved bank.[64] As with any other export of goods, each minerals export shipment requires a customs declaration and each of the following additional documents to get customs clearance:

- A clean BIVAC report (AV) [BIVAC is the Bureau of Inspection, Valuation, Assessment and Control]
- The original of the FERI [FERI stands for Fiche Electronique de Renseignement à l'Importation and it is a legal requirement by OFIDA (Office des Douanes et Assises), the customs authority in the Democratic Republic of Congo (DRC)]
- Supplier's invoice
- Bill of lading
- Certificate of origin, where appropriate
- Packing list
- Waybill[65]

In terms of due diligence, exporters must comply with the International Conference on the Great Lakes Region (ICGLR) Regional Certification Mechanism (RCM), which has been domesticated into law in the DRC, and more precisely the requirements in Appendix 5. Congolese law requires exporters to repatriate earnings within 10 days of shipment for gold and diamonds mined on a small scale, and within 30 days for all other goods.[66] When the bank validates the transaction upon repatriation of export income, the exporter must pay an exchange control fee of 0.2% of the transaction amount.[67]

Minerals must be processed in the DRC before export. Unrefined minerals can only be exported in exceptional cases.[68] The mining regulations from 2003 indicate the requirements for export of unrefined minerals, which include having to seek authorization of the Direction des Mines, having to explain why the processing cannot take place within the DRC and what benefits the DRC obtains through the export of the unrefined mineral, as well as a fee of US $500.[69] Table 2 sets out the duties that must be paid by an exporter.

Table 3 Duties that must be paid by an exporter

NAME	AMOUNT	COMMENTS
Exchange control fee on foreign exchange transaction	0.2% of amount of transaction	Any participating approved bank automatically levies the exchange control fee on the total amount of the transaction it validates when export earnings are repatriated. In the case of exports not involving the repatriation of foreign currency, the fee is levied when the foreign exchange document is validated.[70]
Export turnover tax	0.25%	For gold and diamond from small-scale mining[71]
Customs outwards duty	1.5%	For diamonds and gold by artisanal scale mining: per carat (diamond) or kg (gold)[72] Goes to the DGDA (Direction Générale des Douanes et Accises)[73]
Valuation fee	2.5% of mineral value	Goes to CEEC (Centre d'Expertise, d'Evaluation et de Certification des substances minerales précieuses et semi-précieuses) project, URLnd certifying exported gold and rough diamonds, and verifying traceability of diamonds[74]
Import/export number	US$75 US$45	For legal persons For natural persons[75]
License for import/export operation	US$12	Licence issued by a private bank[76]
Export license	US$150	Goes to BCC (Banque Centrale du Congo)[77]
Tax for export authorization	US$125	Goes to DGRAD (Direction Générale des Recettes Administratives)[78]
Export authorization	US$150	Goes to Divimines (Division des Mines)[79]
IT charge on exports	0.1%	Goes to DGDA[80]
Mining export levy on precious stones (gold, diamonds)	4%	In place of the 10% tax on minerals[81]
For exit at customs	At least US$100	Goes to DGDA[82]
Analysis fees	US$150	Goes to CEEC[83]
ICGLR Certificate	US$350	Goes to CEEC[84]

The comparably high national export taxes and the discrepancy of taxation in comparison with neighboring countries and between Congolese provinces are challenges for exporters. This contributes to increased smuggling of minerals.

The Fair Congo Initiatives

The Fair Congo Initiatives are impact investments by the Chambers Federation into responsible sourcing, value addition and women's empowerment. The Fair Congo Gold social enterprise is the only organization in DRC known to conform with the OECD Due Diligence Guidance as well as meet London Bullion Market Association (LBMA) Good Delivery standards[85]. Fair Congo Gold went on to develop a 'best practice' approach to incorporate open source due diligence and traceability standards by combining lessons learnt from responsible gold programs in country. These systems have since been approved by 4 downstream refining partners. Beginning with the USAID-funded CBRMT, the Fair Congo Initiatives went on to support the Just Gold Project and later began working at BGR sites to scale responsible gold aggregation. The initiatives are also supporting several new responsible gold sourcing programs beginning in the country. They have successfully brought fully traced gold from the DRC to the US, Canadian and European markets, the Fair Congo Initiatives now want to move towards greater scale and value addition.

UPSTREAM MARKET BARRIERS AND RISKS

ASGM supply chains from the DRC are generally considered high risk by downstream companies, as many of the risks listed in Annex II of the OECD Due Diligence Guidance are reported to be present. The risks included in Annex II are: serious human rights abuses associated with the extraction, transport or trade of minerals; direct or indirect support to non-state armed groups, public or private security forces; bribery and corruption; money-laundering; payment of taxes; and fraudulent misrepresentation of the origin of minerals. Fraud, health and safety issues, broader human rights violations, mercury pollution, mining in protected areas, pollution of air, water and soil associated with poor environmental management, and lack of rehabilitation are also commonly associated with gold supply chains in the DRC. The risks and the challenges to mitigate them are a major barrier for access to legal, responsible markets for gold from ASM in the DRC.

The research particularly identified the following upstream barriers to responsible ASM gold trade:

- Governance and formalization
- Access to finance and credit
- Role of cooperatives
- Traceability and chain of custody
- Production challenges
- Gold as a financial instrument
- Trust-based industry

Each of these is detailed in the following paragraphs.

Governance and formalization

For over a decade, stakeholders have sought to pull gold in the DRC from the illicit sector into the licit sector.

Firstly, state governance structures are often weak and the government's capacity and resources to formalize, oversee and professionalize ASM miners are limited.[86] Whilst the government of the DRC

has already identified and designated zones for ASM, created a special registry and tax system and attempted to establish local trading centers for gold,[87] these measures have largely proven to be unsuccessful in formalizing the trade. It is more profitable to smuggle than otherwise; gold mineralization is higher outside the designated areas;[88] the number of officially validated gold sites and ASM mining zones (ZEAs) remains minimal;[89] and the absence of mechanisms to regulate and monitor state agents has contributed to corruption and insecurity, which dis-incentivizes operators from declaring their gold.[90]

The current formal trade of gold from ASM does not incentivize ASM miners to engage. It is commercially unattractive, in part because of the numerous official and unofficial fees and taxes which amount to punitive sums in proportion to the cost of production and market intolerance for a fully loaded price.[91] In 2019, while implementing the Kampene gold traceability project in the DRC, BGR observed that the more stakeholders engage in an official supply chain, the more taxes they need to pay.[92] Incentives to engage ASM miners into a responsible supply chain therefore need to be planned and analyzed together with other competing motivations provided by local structures. It follows that incentives for traders and landowners should be considered by CVCFG as well.[93]

A BGR study[94] suggests that for ASM miners to be engaged in responsible supply chains, the cooperatives and miners should have at minimum the following characteristics:

- Have a minimum degree of organization.
- Be able to fulfil management responsibilities.
- Have the basic administrative capacity to prepare relevant documentation, which is very important for traceability purposes.
- Have a legal formalized status (noting though that the OECD Due Diligence Guidance requires 'legitimacy' rather than full legality).
- Have access to local technicians and services.
- Be able to comply with off-takers' due diligence and know-your-counterparty (KYC) obligations and procedures.

All these criteria will be considered during the implementation of CVCFG and further explored in subsequent research phases.

Artisanal and small-scale miners, however, face multiple challenges when they seek to formalize and comply with the above characteristics. Some of these barriers include overly restrictive regulations, bureaucratic bottlenecks, and lack of resources and capacity to comply, pay for audits and apply for a permit. **Key disincentives to formalization and the promotion of responsible gold include**[95]:

- Tax burden on legal gold exports.
- Pricing of ASM gold being defined by the price of the informal market.
- Impact on net profit of due diligence costs and traceability.
- The legal DRC-based operators have higher costs than their Rwandan and Ugandan counterparts, which buy illegal smuggled gold from the DRC. As such there is greater value in illegal gold mining and trading than legal routes.
- Lack of resources to prove to international buyers that the gold is responsibly traded upstream.
- Limitations linked to compliance with industry standards.
- Legal pressure from the United States and Europe having little effect on the supply chains because current gold supply chains in the DRC are focused on Dubai, India and China as end-markets.[96]

Access to finance and credit

Another important barrier for ASM is the inability to access formal finance or credit. There is a growing understanding and recognition of the extent to which an inability to access formal channels of finance presents a key market participation barrier for artisanal and small-scale miners. In 2019, multiple reports have been published on the subject[97], the OECD Responsible Forum for Mineral Supply Chains dedicated an entire session to exploring ASM access to finance [98] and several international programs have adopted a distinct focus on addressing barriers to financial access.[99] The CVCFG program will be well positioned to build on these findings and evaluate potential solutions that have been raised.

Lack of access to credit / finance for artisanal and small-scale miners is a barrier to formalization that is exacerbated by the informality of most ASM operations in the DRC, which deters financial institutions from extending services to the sector. Most rely on cash-based finance and payment advances down the supply chain. Without access to working capital to purchase machinery, the productivity of ASM sites is restricted.[100] Without access to a secure, regular and reliable cash flow, many miners sell to the most immediate and convenient dealer/broker, even if the price offered is below market value. Without bank accounts, it is challenging to invest any earnings or offer a more formalized means of conducting business with supply chain actors downstream. The informality of typical ASM cooperatives, coupled with the perceived high-risk status of the sector by financial institutions, excludes them from gaining access to basic financial services. Several key barriers to access to finance have been summarized in the table below.

Table 4 Key barriers that ASGM miners face when seeking access to finance

COLLATERAL
Loans by banking institutions are inaccessible to ASM cooperatives because they are unable to meet the required definition of collateral. Typical collateral requirements in the DRC amount to 150% of the value of the loan.[101] Banks in the DRC do not accept ASM gold and most miners lack hard assets such as property.[102] Women are even less likely to have appropriate assets for collateral as fewer women own property, a trend found across sub-Saharan Africa.[103]
CREDIT HISTORY
Banking institutions require an individual or organization's credit history to approve a loan. As Resolve (2019) point out, most artisanal and small-scale miners or cooperatives do not keep a record of financial documents that would offer a form of credit history. The problem of a lack of record keeping extends beyond the ASM sector, with Congolese SMEs in general often struggling to prove their financial stability to lending institutions.[104] Informal cash payments supporting the upstream gold supply chain are unlikely to be recorded and financial institutions have yet to consider other means of assessing a client's credit history. Suggestions of using smartphone records and mobile money transaction histories have been made[105], but in the short term, improving the record management of ASM cooperatives is vital for improving their access to finance.
FINANCIAL LITERACY
As one participant at the OECD Forum[106] phrased it, "Artisanal and Small-scale miners, and financial institutions speak different languages." Financial products need to be adapted to ASM, and ASM cooperatives need greater financial education to access them. Setting up savings accounts for artisanal miners is futile, if, as one artisanal miner highlighted at the OECD forum[107], 60% of the cooperative are illiterate and cannot use ATMs.[108]Supporting miners to both access finance and manage their money is essential to encouraging the growth of a longer-term approach to money management. Such an approach can encourage cooperatives to view themselves as enterprises, fostering longer-term decision-making regarding investment in areas such as equipment purchasing, selecting buyers and the road to legal compliance.
FINANCIAL PENALTIES
At present, there are many disincentives for ASM cooperatives to access formal finance. It is well documented that the informal gold mining and mineral trade activities generate greater value for local supply chain actors.[109] The tax burden on legal gold exports from the DRC is high, making it challenging for formal gold dealers to offer a higher price at the mine site than their informal competitors. Artisanal and small-scale miners also complain that the interest rates on loans offered by banks exceed the margins they make on their gold sales.[110] Influencing the Congolese government's economic policies and regulations in the mineral sector may be beyond the scope of the CVCFG program, but an understanding of how the broader economic environment interacts with financial service products is essential for exploring avenues to address ASM market barriers.
REMOTE LOCATION
The remote location of many ASGM sites makes it challenging for miners to access financial institutions or ATMs, both of which are typically located in towns and cities. For reasons of security, convenience and affordability, cooperatives often prefer to sell their gold close to the mine site. Depositing proceeds from sales into a bank account is challenging if the nearest bank is 50km away and the cost of travel amounts to 30 USD.[111]
LACK OF DATA
The lack of data on ASGM sites makes the technical mine site evaluation challenging. Moreover, there is a significant amount of data being collected for downstream due diligence, but less for upstream.

Role of cooperatives

The way that ASM cooperatives operate in the DRC creates another prominent barrier to responsible production and sourcing of gold. The Mineral Code in the DRC requires miners to organize into cooperatives. Only cooperatives can hold a mineral title to a specific ZEA. Research has found that this legal requirement ignores the fact that many miners in the DRC are already organized in 'mining committees', their own informal organizational structures.[112] Many of these informal types of organizations however do not have the capacity to become formal cooperatives, as the registration procedures are often bureaucratic, costly and complicated. As a result, in some cases, businessmen and politically connected elites or customary authorities have started to fill this gap and use their networks and capital to establish cooperatives in order to get access to lucrative ASM permits. Through the ownership of ASM permits, such a 'cooperative' then exercises leverage over the miners working on its title through a carrot and stick approach, e.g. by controlling access to the mine and promising benefits if workers join the cooperative as members. In some cases, these 'cooperatives' convince the miners to become members by promising mining tools and equipment, which in many

cases never materializes. Despite collecting fees, many do not provide services, training or disseminate information for their members.

The research also found that membership in a cooperative is in some cases not voluntary and is used to control access to the mine (and consequently rents from the ASM business). If mine workers want to work in a particular pit, they are forced to join the cooperative. In addition, cooperatives are frequently organized along ethnic lines and often allow access based on ethnic affiliation. Mine workers then have to pay for a membership card, and (informal) taxes and contributions, but don't pay an official 'member fee' and don't control how this is used. ASM cooperatives in the DRC often do not fulfil basic characteristics of cooperatives. Cooperative leaders are often not democratically elected and members rarely participate in assemblies and are not aware of their right to be represented or to influence the cooperative. ASM workers are often not aware of their rights as cooperative members and cannot challenge the situation. This information underlines the need for a conflict assessment to support implementation of the CVCFG program.

In this sense, ASM cooperatives in the DRC may actually increase the financial burden for miners, because the cooperatives demand a share of the miners' revenues, just like other actors who request a share through (informal) taxes, such as customary authorities, landowners and chiefs. In some instances they provide no benefit for the mine workers in return, except the fact that being associated to a cooperative is a legal requirement. It is not surprising that miners often do not see the cooperatives as legitimate structures and prefer their own 'mining committees', because these provide actual services to them.

To summarize, ASM cooperatives in the DRC have sometimes been said to be an 'institution that 'legalizes' exploitation'.[113] Research has found the cooperatives can be vehicles allowing political, economic and customary elites to exploit miners economically and to continue to exercise power over miners. This in turn allows government authorities to increase control over the mining sector but also rent-seeking access to revenue from ASM.

The CVCFG program plans to engage with ASM cooperatives and is also legally required to collaborate with them in order to build a commercially viable and conflict-free supply chain of ASM gold. CVCFG will therefore need to get an in-depth understanding of the dynamics between cooperative members and cooperative management, and the latter's political, social and economic connections and vested interests. CVCFG will need to work on issues around the legitimacy of the cooperative and its management in the eyes of the miner and mineworkers and will therefore likely need to place emphasis on supporting the establishment of good practices in cooperative structures and management.

Traceability and chain of custody

The implementation of a traceability and chain of custody system also presents a challenge. Product traceability through an appropriate chain of custody system is a core feature of step I of the OECD due diligence guidance, building the management systems to ensure supply chain controls. Traceability should improve control over and transparency of the ASGM supply chain in the DRC.[114] However, to date, these measures have only been employed at a pilot stage in a few gold supply chains, and are not generally applied (see below for an overview of initiatives and lessons that can be learnt for CVCFG).[115] BGR noted several challenges in applying a traceability scheme for ASGM in the DRC (Kampene gold traceability project), including the lack of acceptance of the system by traders, the complexity of the supply chain and actors involved and the lack of a comprehensive registration system.[116] Another serious problem is that both legally and illegally exported gold share the same physical characteristics,

so post-purchase physical or chemical analyses cannot be used to differentiate legal from illegal ASM gold from the same origin. This makes it difficult for buyers to distinguish whether the gold they buy comes from legal or illegal mining without some additional document-based system attached to physical controls over the gold.[117]

Production challenges

Offtakers usually require a minimum quantity of gold per consignment to justify the costs of international freight, insurance, and financing.[118] Refiners and downstream actors often need a minimum size of consignment lots in order to do the batching process.[119] However, ASM operators struggle to ensure regular gold production due to factors related to seasons, interrelated livelihoods, limited mechanization and automation, and other variables.[120]. ASM operators therefore have more difficulties in delivering the minimum consignment sizes usually required by downstream actors when they source gold from LSM.[121] In addition, ASM mined gold can contain small particles of deleterious elements, which may make it technically difficult to refine the gold.[122]

Gold as a financial instrument

Gold is used as a financial instrument to launder money and to substitute for local currency. The use of gold as a currency distorts the local price of gold, inflating gold prices above the international gold price.[123][124]

Trust-based industry

Finally, the establishment of a responsible supply chain is also challenging because it involves multiple parties that need to trust each other, and trust is only built with a significant investment of time and personal commitment.[125]

UPSTREAM NEEDS AND EXPECTATIONS

This section will outline upstream actors' main needs and expectations from CVCFG's program. Further field research is needed to identify what would incentivize upstream actors to engage in the program and identify the issues that CVCFG needs to address.

CONCLUSIONS AND RECOMMENDATIONS FOR CVCFG

A. PRE-SELECTING ACTORS AND AREAS THAT CVCFG COULD POTENTIALLY COLLABORATE WITH FOR ITS SUPPLY CHAIN

The above insights into the upstream supply chain should be built on and expanded with the goal of identifying suitable locations, ASM cooperatives, traders and exporters that could potentially work with CVCFG as part of a responsible gold supply chain. The research into the ASM and LSM tier shows that there are potential entry points to be assessed further in depth. The same should be done for traders and exporters.

There are at least 18 mine sites that have been classified as green, and where IPIS has reported no use of mercury and no armed groups being involved. The feasibility of including these 18 sites in the CVCFG program should be assessed.

Levin Sources recommends the following actions for phase 2 of the market analysis:

- **Further analyze the ASGM locations and cooperatives that the CVCFG program could potentially work with.**

- More in-depth field and fact-finding research on the areas that have been highlighted in this chapter, in particular:
  - The sites in clusters 1, 2, 3, 4 and 5, as no child labor was observed or recorded in those.
  - The ASM dynamics around potential anchor institutions such as LSM companies and conservation organizations.
  - The OECD risks in each site, the overlap with ZEAs, the gold flows, and if the sites belong to an existing project or initiative. High-level analysis using the IPIS webmap shows that only 2 sites overlap with ZEAs. If this is confirmed, and a site selected to work with does not overlap with an existing ZEA, CVCFG should coordinate with the government to establish whether it is possible to set up a ZEA in that area.

  Acknowledging that there might be further sites where the project could work, this chapter provides an initial screening for site selection, having identified clusters that are more likely to be suited to the program than others.
- It is important to consider that the criteria used to select clusters of mines are relatively strict and they therefore considerably limit the number of possible mine sites or ASGM areas. CVCFG will need to move beyond those if it is to have a longer-term impact. Therefore, this analysis should be seen as a first attempt at defining possible entry points, but not as a final judgement. To identify suitable ASGM mines and areas to collaborate with, this analysis must be extended, the criteria refined (e.g. not using them cumulatively), backed up by evidence-based analysis from field work and stakeholder engagement. This analysis will need to be continuous.

- **Recognize the role, and importance of local traders, the challenges they face in operating and sourcing responsibly, and the threats they may pose to the program and the sustainability of its outcomes if marginalized. Analyze the best way to include them in CVCFG's program.**
  - Secure interviews with local traders and with other initiatives (e.g. Just Gold and CBRMT) to understand how local traders were incentivized and included in their programs.
- **Recognize the role of larger traders and exporters / comptoirs, the challenges they face in operating and sourcing responsibly, and conduct further research to:**
  - Confirm the tax burden listed in this chapter.
  - Assess further challenges for gold exporters in the DRC.
  - Assess in what way the above-mentioned regulations correspond to reality, meaning whether it is enforced, whether exporters comply, and whether there are informal and/or customary rules and payments that exporters are subject to.
  - Research which exporters/comptoirs exist, who they are, and where they are based, in order to identify potential exporter/comptoir partners for the CVCFG project.

B. IN-DEPTH ASSESSMENT, ANALYSIS AND STAKEHOLDER ENGAGEMENT IN THE SELECTED SUPPLY CHAINS OF ASM PARTNERS

Once potential partner areas, cooperatives and supply chain actors are selected, the CVCFG program will need to conduct in-depth analysis in these specific areas and on those specific actors. Such analysis should lead to a better understanding of the context the program will be working with. It should include due diligence assessment of mines, cooperatives and traders as well as further field research on the role of additional stakeholders in the ASM gold supply chain. As the context and dynamic differs greatly between different locations in the DRC, this is crucial and should form part of continuous efforts at monitoring and evaluating the situation around the project and supply chains and should inform the adaptive management approach of the program.

- **Take into consideration the summarized upstream market risks and barriers** and further investigate these in the selected areas, supply chains or ASM actors.
  - Measures to mitigate the identified risks and overcome the barriers.
  - Actors to be engaged in order to implement mitigation measures.
- **Analyze the upstream market needs and expectations of upstream actors.** Further field research is needed to identify what would incentivize upstream actors to engage in a responsible gold supply chain and identify the issues that CVCFG needs to address.

C. POLITICAL ECONOMY ANALYSIS AND CONFLICT ASSESSMENT

- **Carrying out a political economy analysis (PEA) will be critical for the implementation of the CVCFG program** as it will help with understanding the political and social dimensions around ASM gold in the DRC. It will require an assessment of the dynamics between structures, institutions and stakeholders to understand how decisions are made.
- Performing a conflict assessment will complement the PEA by looking into the dynamics of existing or potential conflict in the context where the CVCFG program will operate. Such an analysis would include understanding the dynamics among the different groups and identifying areas which could potentially escalate into new conflicts or enhance existing ones.

4 – THE MIDSTREAM SUPPLY CHAIN

This chapter provides an overview of the midstream supply chain including transport and logistics companies, refiners and bullion traders. Phase 1 of the market analysis has focused on refiners and will provide an overview of the barriers and motivations identified through interviews. Transport and logistics companies as well as bullion traders are listed but will be further researched during phase 2.

TRANSPORTATION, LOGISTICS AND SECURITY

The transportation required in the ASM gold supply chain takes various forms from the mine to the refining stage. An understanding of the transportation and logistics activities will support not only the understanding of risks at the different stages of the gold trade, but also will lead to the mapping of stakeholders involved and operational costs. Transportation costs can represent a real bottleneck and deterrent to the commercial viability and sustainability of responsible ASM gold initiatives, especially where production is in remote, high risk areas and where volumes available for shipment are small. As a result, understanding and finding solutions to the transportation challenges, and identifying key actors willing to contribute and engage as transportation and logistics companies, are both fundamental elements.

Phase 2 of the market analysis will cover transportation and logistics companies by:

- Extending the stakeholder mapping of companies in the logistics and transport sector.
- Interviewing stakeholders to detail motivations and barriers to engaging with ASM gold from eastern DRC.
- Identifying solutions in collaboration with interested stakeholders in the sector.

REFINERS

Gold refiners are critical actors in the gold supply chain and represent the pinch point of the whole gold market, sourcing from upstream actors and selling to various industries including jewelry, ICT, medical supplies, and central banks. They purchase and transform a wide range of gold types into marketable bars and products. The main sources of gold include mined material from LSM and ASM gold mines, called doré, and scrap from used jewelry and electronic equipment. Before processing the gold, they use assaying methods to determine the composition of the lot received and measure the proportion of gold content. Different processes are then used to extract and separate the gold and remove impurities.

Levin Sources engaged with 27 gold refiners of different sizes, accreditations, and locations (Europe, South Africa, Middle East and Asia). Eight refiners accepted the interview invitation, including 2 of the largest global refiners. This represents a positive engagement rate of 30%.

ATTITUDES TO RESPONSIBLE GOLD SOURCING

DEFINING RESPONSIBLE GOLD

Refiners have different expectations and 'red lines' when it comes to sourcing responsible gold. These range from "going beyond the OECD Due Diligence Guidance Annex II risks", to making broader considerations over traceability, chain of custody, social, environment, health and safety, gender and wages.

- One refiner stated that responsible gold is gold that has been mined to a standard "*beyond the OECD Due Diligence Guidance, taking into account environmental, human rights and social issues*". For this refiner, usage of mercury is accepted if it is used in a controlled way.
- Another refiner stated that responsible gold means that the gold has been produced transparently and that all required documents are shown to them, and ethical gold means that the gold was extracted without child labor, human rights violations and where men and women both have access to mining facilities to get a revenue. For this refiner, it is important to work progressively towards reducing the usage of mercury and engage with local partners to invest in an alternative technology.
- One large refiner would not use the term 'conflict-free' as it does not ensure that the gold is sourced responsibly, for example it includes gold from mines using mercury in an unsustainable way.
- Another refiner has created their own trademark which includes traceability from mines and the highest standards of environmental stewardship. This specific initiative is relevant since it influences refiners to look beyond OECD Annex II risks and it could lead more companies to follow their lead.

The lack of a standard definition for responsible gold shows that the refiners are not yet aligned on what characteristics responsible gold must have. This leaves the CVCFG program somewhat dependent on the preferences of whichever market steps up as the preferred destination for 'responsible' Congolese gold. Alternatively, the CFCVG program could propose a clear definition about the gold it will bring to the market. and which of the above-mentioned considerations are addressed. While not all the above risks can be fully addressed from the outset, the definition of responsible gold could be presented in the logic of progressive improvement over a set period but with a clear starting point: compliance with the OECD Due Diligence Guidance.

GOLD SOURCING

Many refiners interviewed already source ASM gold, alongside standard LSM and recycled gold. It represents a small proportion of their purchases (1% to 10%). They are generally open to sourcing from ASM, and some refiners, especially in Switzerland, recognize the need to engage and not marginalize the sector. Their motivation to source from ASM is often driven by the desire to improve company image and reputation, yet they are equally aware that the risks of engaging with ASM can potentially harm their reputation.

Refiners source gold from ASM in different locations, with South American countries being the most prominent countries of origin. Some source from certified ASM gold counterparties or initiatives based in the region and tend to purchase gold in countries where they have existing relationships (which helps with de-risking). ASM gold from African countries is generally avoided due to its perceived higher risk and the challenges of managing that risk. Two refiners challenged such widespread perceptions. One is currently conducting due diligence on the ASM gold supply chain of a project in eastern DRC, in order to assess the economic viability of sourcing the project's gold. Another refiner is involved in the Impact Facility's project with ASM in Tanzania.

Most refiners have adopted strong management systems to support gold supply chain due diligence in line with the OECD Due Diligence Guidance or other standards such as LBMA. One refiner is a founding member of the working group that developed the Gold Supplement to the OECD Due Diligence Guidance, and also a member of the Multi Stakeholder Steering Group in charge of implementing the Guidance. Some refiners go beyond the OECD Due Diligence Guidance and also assess and manage (some) risks linked to health and safety and the environment (no use or controlled

use of mercury). Some refiners have traceability systems up to the mine site, while others are proactive and visit the ASM mine sites themselves to do the KYC and risk assessment (something required of LBMA members). One refiner stated that they are also bringing their customers to visit the ASM mine sites.

The expectations of refiners' customers towards responsible sourcing present a mixed picture. One refiner reported that their clients from the ICT industry do not ask where the gold comes from. However, another refiner stated that ICT and automotive sectors were nascent markets, with some big brands willing to include ASM gold in their supply chain, although the quantities needed are far beyond what responsible ASM sources can produce. According to another refiner, jewelers are increasingly asking if the gold is extracted in the Great Lakes Region. On the other hand, banks, which are mainly purchasing recycled gold, are not asking for any information about the origin of the material. One refiner reported that clients buying responsible gold are primarily high-street jewelers who have been targeted by NGOs, and smaller ethical jewelers who have a genuine interest in the topic. Regarding promoting ASM gold to their clients, a refiner reported that they are communicating across the industry on why and how they undertake responsible ASM sourcing.

The diverse expectations of refiners' customers confirms the importance of engaging downstream companies alongside refiners, since demand and interest from them is likely to give further motivation to refiners to engage.

SOURCING ASM GOLD FROM THE DRC: BARRIERS AND REQUIREMENTS

BARRIERS

Refiners reported several barriers when sourcing ASM responsibly, including the lack of certified ASM sources, the reputation of the country of origin, the costs of logistics and security, the lack of will by exporters to complete the required due diligence, and the payment methods being used.

Lack of certified ASM sources

Firstly, there are a limited number of certified mines and their volumes are relatively low. This is a constraint for refiners as they require more time and resources to set up responsible ASM supply chains from scratch in the country of extraction. Engaging with ASM communities takes a long time and a lot of effort, especially if they are not yet formalized and if the refiner has no presence or network in the country.

Reputational risk

Refiners would like to engage in a program that supports sourcing gold from the DRC but they fear reputational risks and competitors who may openly criticize their work and damage their reputation. The reputation of the country of origin is a barrier for some clients who are reluctant to buy gold from the DRC, the Great Lakes Region or even the entire African continent. A competitor, NGO or media organization may be informed that the refiner is sourcing from a high-risk country and publicize the arrangement, potentially damaging the company's reputation. De-risking this will require a joint communications strategy with the refiner, including consideration of when discretion or publicity is the better approach (implying the importance of having other program stakeholders respect these requirements). **The CVCFG program needs to be sensitive to the very real reputational risk that refiners who decide to engage further with the program are facing.**

Cost of logistics and security

Refiners may decide to stop sourcing from ASM when the cost of logistics and security services are higher than the benefit they derive from buying small and occasional quantities of gold. Challenges may include the transportation of gold, as well as security procedures, and the expense of sending people to conduct due diligence on the ground in conflict affected and high risk areas (CAHRAs). One refiner stated that they need to have a presence in the country of origin of the material in order to make the due diligence and logistics process easier, otherwise it is too costly. High costs linked to customs and taxes can also be a factor that deter refiners from sourcing from a specific country.

Lack of will by exporters to complete due diligence obligations

Smaller refiners lack leverage to put pressure on their suppliers to provide information on their supply chain and complete the KYC (Know-Your-Counterparty) forms. If suppliers do not want to conduct due diligence, they will find other offtakers who are less demanding. For example, one refiner stated that he tried to source from Burkina Faso, but the supplier refused to undertake the KYC and share any documentation.

Payment methods

Refiners face challenges when trying to organize payments to producers. A refiner reported that paying the miners is a challenge for them, as they don't always have a bank account and prefer to be paid in cash. A refiner reported that some banks do not authorize payments to countries listed as high-risk. Solutions to these practical barriers will be explored in the next phases of the market analysis. This aspect is crucial to CVCFG as easing the payment mechanism is crucial to promoting a viable business.

REQUIREMENTS

Credible due diligence

Refiners would need to determine the variety of risks and due diligence obligations that engaging in the program would entail. Specifically, LBMA refiners must comply with the LBMA Good Delivery Standard and the LBMA Responsible Sourcing Guidance. To help refiners, the LBMA has developed several tools (e.g. KYCs and self-assessment questionnaires) and these are regularly used to carry out due diligence. At times, refiners may develop their own tools, in line with the LBMA's requirements. It is important to note that the due diligence forms are not used for a box-ticking exercise. Once a refiner receives the filled forms, the content undergoes a deep due diligence process whereby the management decides whether there is any risk in engaging with the business and if so whether the risk is in line with their risk appetite. Therefore, it is paramount that both exporters and refiners are supported in the process of due diligence (both when sending information and when reviewing), to ensure that blockages can be overcome. These tools include the KYC and an ASM self-assessment which can be downloaded here.

Scalability, commercial viability and reliability of supply

Refiners need a commercially viable supply of gold for their investment to make financial sense. This means that they need scalable and reliable supply. Supply from ASM is characterized by small quantities and volatility, which is a challenge for refiners who must sell to customers on an ongoing basis. It is likely the minimum volumes will vary depending on the cost of due diligence, the time invested by refiners, the transport and shipping, the costs associated with security and the level of aggregation. According to one refiner, the lot size would need to be above 5 kilos per month for their engagement to be viable. Another refiner reported they did not receive any deliveries for 4 months from certified mines. Some refiners stated that sourcing from ASM is currently

not profitable overall. As one refiner reported, he tried to source from a certified ASM gold initiative, however it was not economically viable as the premium was too high and the program did not address logistics and export issues. Even with an agreement in place with the refiner, ASM suppliers can also decide to sell to alternative (often informal) buyers who may offer a better price and pay in cash immediately, further reducing possible volumes and affecting reliability. This demonstrates the importance of understanding miners, traders and their commercial drivers, to start enabling refiners to foster relationships of trust with ASM communities.

Working with trusted partners

Refiners prefer working with an initiative or a partner which is already in place in the country of extraction and has a strong foothold. Refiners that source from ASM want to engage with a reliable local partner that they trust. In addition, some refiners feel the need to visit the mine sites in person; however not all companies allow their personnel to travel to high risk countries like the DRC. This means that (a) trust must be built between the local organization and the refiner to ensure engagement, and (b) the due diligence information and processes designed by the CVCFG program must give refiners confidence that they can engage safely. Several refiners suggested CVCFG should provide additional support to carry out due diligence on the ground because they do not have a presence in the DRC.

CONCLUSIONS, RECOMMENDATIONS AND OPPORTUNITIES FOR CVCFG

REFINER ENGAGEMENT

Two (one small and one medium scale) refiners would be willing to engage further with the program, and one **welcomes the initiative. However, there would need to be strong safeguards and assurances that the program would seek to meet their expectations.** The program needs an approach that respects and where possible incorporates their advice and requirements. Expected next steps are:

- Consider further engagement with additional refiners in Europe and expand interview outreach to refiners in Asia and the Middle East.
- Further engage with refiners who are interested in participating in the program.
  - Confirm engagement preferences.
  - Establish a working group of refiners willing to engage in the program and explore with them possible solutions to the challenges identified during the research phase. This would set the basis for the establishment of a more structured group of actors that could be engaged in the program through a series of pilots that meet their expectations.
- Gather feedback from refiners to inform the development of an effective engagement approach for their sector. They will need to be convinced and be able to convince their clients of the business case for sourcing ASM gold from the DRC.
- Consider launching an awareness-raising campaign to counter the frequently negative perceptions about doing business in DRC. Knowledge of the actual risks and legal restrictions on sourcing from the DRC may address the concerns of several refiners.

AWARENESS RAISING ABOUT THE DRC

Refiners, as well as their suppliers and customers, require further education of the actual risks and legal restrictions of sourcing from the DRC. They need support in challenging the negative perceptions about the DRC within their organizations, supply chain tier and customer base. Based on their suggestion, the program **should design an awareness-raising approach that specifically**

addresses the reputational concerns of refiners and their stakeholders. However, for others, such a strategy will still not be enough to engage in the program. For example, one refiner specifically reported fears over buying gold from the DRC as this would prevent them from engaging with London Bullion Banks which, they believe, do not accept gold from the DRC.

RECOMMENDATIONS FOR ONE SUPPLY CHAIN MODEL TO BE TESTED AND IMPLEMENTED UNDER CVCFG

Based on the engagement with refiners, Levin Sources will:

- **Define the due diligence approach that the CVCFG program should use to vet supply chain participants for potential inclusion in the program, and to gap-assess their performance against internationally recognized standards and also refiners' (and other priority market) expectations.** A strong due diligence system, including a credible and reliable partner on the ground, must be in place, providing transparent risk assessment and management and providing robust evidence and documentation.

- **Consider refiner's expectation on volume and reliability of supply at every stage.**

- **Define a viable payment channel for refiners to enable ASM gold sourcing.** Regarding payment to miners, some refiners suggested one bank account could be established per cooperative. Phase 2 should look at financial barriers upstream and propose viable solutions that are suitable for both local communities and refiners.

BULLION MARKET

A bullion market is a market where gold, silver and associated derivatives are traded. The London clearing system is the bullion market where most global 'over-the-counter' gold and silver is traded. This is managed by London Precious Metal Clearing Limited (LPMCL) which is a not-for-profit organization which clears the gold, owned and operated by the 5 clearing LBMA members: HSBC, ICBC Standard Bank, JPMorgan, Scotiabank and UBS. At the time of reporting on the first phase of the market analysis, the research on bullion markets has just begun. However, refiners reported valuable information that can be introduced at this stage and which will be subject to review and further development.

Two refiners reported challenges when trying to pay for gold from conflict-affected countries and high-risk areas. According to them, when refiners try to make payments to suppliers located in what their banks deem to be a conflict-affected or high-risk area, the payment is denied. According to interviewees, banks' officers ask questions that show little knowledge or understanding of the supply chain and sector, which makes doing business challenging. In the worst-case scenario, banks can also decide to close the account if they believe the gold is being sourced from a conflict-affected or high-risk area. This is reported to be one of the greatest reasons why refiners choose not to source from the DRC. Such findings require further research and a recent meeting with the LBMA should pave the way for the next step of this inquiry. However, challenges are not reported only over payments. Bullion banks reportedly do not accept gold from countries which are too risky for them, which inhibits refiners from sourcing from such countries, which include the DRC.

5 - THE DOWNSTREAM SUPPLY CHAIN

JEWELRY MANUFACTURERS AND JEWELERS

This chapter provides an analysis of the jewelry sector following interviews with market actors. It explores their attitudes and barriers to responsible sourcing, their requirements for purchasing the program's gold and highlights key recommendations for the CVCFG program.

The jewelry market was identified as a key target downstream market for gold sold under the CVCFG program. The sector purchases the greatest proportion of gold, accounting for at least 50% of global gold demand.[126] Furthermore, this sector is able to work with gold that is de-commoditized, as Fairtrade and Fairmined gold demonstrate with their ability to achieve prices above the London Fix for their certified material.

In Quarter 2 of the 2019 financial year, demand from the global jewelry sector translated to 1,123 tons. India, China and the United States represent the largest markets for gold jewelry respectively.[127] Although European demand for gold jewelry represents approximately 3% of the sector's total demand, the continent has the strongest demand for responsible gold at present. Significantly, Europe is home to the greatest number of jewelers and jewelry manufacturers holding licenses to sell certified ASM gold to consumers. Fairmined indicates that most of its license holders are found in Europe.[128] Over the past decade, there has been a growing awareness of the importance of responsible and transparent supply chains across multiple commodities. In Germany, the increase in production of certified gold jewelry was primarily driven by the ethical considerations of jewelry companies, and accelerated by increased demand by consumers sensitized both by jewelry companies and broader cultural change.[129] **Following further research, it was recognized that the European jewelry market, with its growing supplier and consumer base interested in or already familiar with purchasing responsible ASM gold, could offer a strong potential route for the CVCFG supply chain. This is therefore the first jewelry market investigated.**

Sixty-five jewelry manufacturers and jewelers were invited to be interviewed for the gold market analysis. Twenty-two interviews were conducted, representing a positive initial engagement rate of 31%. Market actors in the jewelry sector have been divided into 5 distinct categories based on their differences in size, supply chain position, services, product value and clientele. These include the Jewelry Manufacturer, the Designer Maker, the SME, the High Street Retailer/Jeweler and the Luxury Jeweler. The key characteristics of each jewelry market actor are outlined below.

Table 5 Characteristics of Jewelry Market Actors

Jewelry Manufacturer	
Size	Medium to Large
Supplier	Refiner or Refined Gold Trader
Source	Large volumes of refined or unrefined gold of varied provenance, dependent on in-house refining capabilities
Service	Manufacture jewelry components or finished jewelry. May also refine or recycle precious metals.
Clientele	Jewelers – Designer Maker, SME or High Street Retailer/Jeweler (International)

Designer Makers	
Size	Small (workforce: 1-3 employees, 1 workshop or store)
Supplier	Jewelry Manufacturer or Refined Gold Trader
Source	Small, infrequent volumes of refined gold; grain, sheet, wire. Manufactured gold jewelry components; chain, fastenings.
Service	Design and manufacture small collections and/or bespoke jewelry of medium value
Clientele	Consumers (Local, National)
SME	
Size	Small to Medium (Workforce: 3-50 employees, Stores: 1-10)
Supplier	Jewelry Manufacturer or Refined Gold Trader
Source	Medium volumes of refined gold; grain, sheet, wire. Manufactured gold jewelry components; chain, fastenings.
Service	Design and manufacture multiple collections and/or bespoke jewelry of medium value
Clientele	Consumers (National, English speaking countries)
Luxury Jeweler	
Size	Large (Workforce: 50+ employees, Stores: 10+)
Supplier	Jewelry Manufacturer or Refiner (if producing own collection)
Source	Refined gold
Service	Design and manufacture multiple jewelry collections of high value
Clientele	Consumers (International)
High Street Retailer/Jeweler	
Size	Large (Workforce: 50+ employees, Stores: 10+)
Supplier	Jewelry Manufacturer or Refiner (if producing own collection)
Source	Finished jewelry or refined gold
Service	Sell finished jewelry by one or more brands of low to medium value. May design and manufacture own collection.
Clientele	Consumers (National and International)

Designer Makers represent the greatest proportion of stakeholders interviewed; 21 were invited and 43% (9) proceeded to the interview stage. Of the 24 SMEs who received the interview invitation, 21% (5) agreed to be interviewed. High Street Retailers/Jewelers were the third largest group invited to interview (12), and 25% (3) accepted the invitation. The lowest engagement rate was among Luxury Jewelers; 14 were invited, and 20% (2) agreed to be interviewed. Finally, there are a handful of large Jewelry Manufacturers in the UK. Levin Sources invited and interviewed 3 of them, representing a 100% engagement rate.

The number of market actors invited to be interviewed, and the acceptance rate of each category, are primarily reflective of 3 factors. Firstly, the overall size of each category; for example, there are more Designer Makers in Europe than large Luxury Jewelers. Secondly, the estimated appeal of the CVCFG program; background knowledge of the sector indicated that market actors already sourcing alternatives to standard gold might be more likely to consider ASM gold from the DRC, supported by the CVCFG program. Thirdly, the company's existing network provided the initial pool of stakeholders and it was found that those to whom Levin Sources was familiar were much more likely to accept the interview invitation. This outcome reinforces the importance of trust towards organizations involved in supply chain programs which will be further detailed below (as well as the importance of building trust through meaningful engagement, under an effective communications and outreach strategy, as part of the program.) Following the first phase of engagement with the jewelry sector, it is reasonable to assume that some of the barriers raised by market actors in each category may also explain the lack of response to interview requests by their peers.

Defining and distinguishing market actors within the broad jewelry supply chain is key to pinpointing which ones may have the greatest appetite for buying responsible gold from the DRC. As the following analysis highlights, each has different attitudes, barriers and drivers towards sourcing responsible gold. These will need to be taken seriously by the program to increase its chances of establishing trusted, lasting relationships with downstream buyers.

ATTITUDES TO RESPONSIBLE GOLD SOURCING

DEFINING RESPONSIBLE SOURCING

First, it was important to establish the participants' understanding of the notion of responsible sourcing and their current approach to integrating responsible sourcing principles into their business practices. Understanding jewelers' definitions of responsible gold will guide the program and provide relevant information towards the expectations of these companies regarding ASM gold (i.e. what are the minimum requirements and impacts they are interested in seeing as a condition of buying gold from ASM provenance generally). The majority (90%) had a somewhat defined conception of responsible sourcing, with 68% of responses referencing social impacts and 23% highlighting environmental impacts. The way in which participants' conceptions of responsible sourcing are reflected in their actual gold sourcing provenances, activities and marketing and communications approach, was found to be determined by a multitude of factors. As highlighted in the jeweler category profiles, each participant differs in size, services and clientele which determines their incentives and barriers to responsible gold sourcing. The following chapter will explore in detail these interactions, concluding by recommending tailored avenues for engagement with each jewelry category.

GOLD SOURCING

64% of participants cited sourcing more than one gold provenance, including conventional, recycled, certified recycled and certified ASM. None of the participants currently, to their knowledge, source gold from the DRC.

Certified ASM gold was the most common provenance, included in 44% of participant responses, and all participants were familiar with ASM. 100% of Jewelry Manufacturers and Designer Makers, 60% of SMEs and 33% of High Street Retailers/Jewelers source Fairtrade or Fairmined gold. ASM gold was reported to be knowingly sourced only through the Fairtrade and Fairmined initiatives, with the former being the more popular provenance among participants in the market analysis. The majority of participants sourcing Fairtrade gold stated that it came from the MACDESA mine in Peru.[130] As one Jewelry Manufacturer assessed, 75% of their clients purchasing certified ASM gold opt for Fairtrade, and 25% choose Fairmined. However, for Jewelry Manufacturers, the combined sales of gold of both provenances constitutes less than 1% of their gold sales and their motivation for sourcing certified ASM gold was to "do the right thing". They recognize a small, marginally increasing demand among Designer Maker clients for Fairtrade and Fairmined gold/gold products, but claimed the commercial benefit is negligible. One manufacturer stated that their business would probably be more profitable if it stopped selling certified ASM gold.

On the other hand, many Designer Makers identify certified ASM gold as key to their business model and brand. Following a process of self-education and awareness-raising of the potential harms of sourcing 'irresponsible' gold and experiencing an increase in the last 5 years of clients seeking responsible gold, most offer their customers certified gold jewelry. The added value for Designer Makers relates to the positive social impacts, management of environmental harms and trusted upstream initiatives. The majority of Designer Makers only produce bespoke, made-to-order, jewelry,

offering customers a choice of gold provenances and purchasing small volumes as required. Only 2 of the jewelers in this category solely sourced certified ASM gold. SMEs expressed similar motivations to Designer Makers but given their broader market base (beyond 'conscious consumers') and production of larger permanent collections with associated cost margins, were likely to rely on recycled or standard gold. One High Street Jeweler/Retailer sourced certified ASM gold for a limited-edition jewelry collection.

Recycled gold was the other prominent choice for Designer Makers (78%), Jewelry Manufacturers (66%), Luxury Jewelers (50%) and SMEs (40%). Certified recycled gold was referenced by one SME, highlighting an initiative popular in Switzerland. Recycled gold constitutes the majority of gold sourced and sold by the larger Jewelry Manufacturers interviewed. Both companies are integrated into larger precious metals businesses featuring scrap gold refineries from whom they source. Such models enable them to source from a single or small number of refineries that share the same due diligence requirements. Designer Makers and SMEs source recycled gold and gold components from Jewelry Manufacturers primarily because it represents a more affordable provenance compared to certified ASM gold, is available in larger and more regular supply, and appeals to their desire to avoid the environmental impacts of gold mining and have a lighter environmental impact altogether. For most, sourcing recycled gold felt like a "neutral stance", in between standard and certified ASM gold in terms of its responsible sourcing credentials. Another common form of recycled gold used by these participants involves the re-working of customer jewelry to produce bespoke pieces. The service has the added value of retaining the personal sentimental value of gold jewelry. One Luxury Jeweler sources all fine gold from recycled industrial gold, excluding known provenances it believes are higher risk, such as gold from electronics. One High Street Jeweler/Retailer partially sources recycled gold from precious metal traders.

High Street Retailers/Jewelers and Luxury Jewelers are most likely to rely solely on standard gold. Of the 2 Luxury Jewelers interviewed, one sources primarily standard gold and the other purchases gold jewelry components which they suspect are manufactured from standard and recycled gold. The High Street Retailers/Jewelers purchase prefabricated gold jewelry and admit they find it challenging to determine the gold's provenance. One participant from this category stated that they didn't have a responsible sourcing policy because it's not of value to them; they have not experienced any customer demand to know the origin of the gold in their jewelry and do not want to pass additional costs on to customers. Another High Street Retailer/Jeweler manufactures most of its collection in-house, sourcing standard gold from RJC Code of Practice~~s~~-accredited first tier suppliers. One Jewelry Manufacturer draws on standard gold bullion to meet periodic shortages. Conventional gold still has a recognized place in the European jewelry market and it is likely that the sample of participants interviewed does not reflect the typical use of conventional gold across the continent. At both the interview offer and acceptance stage, it is likely participants were selected or self-selected following an existing interest in more responsible alternatives to conventional gold.

To summarize, based on the market analysis so far, Designer Makers and SMEs are more likely to be motivated and commercially able to source ASM gold; High Street Retailers/Jewelers and Luxury Jewelers would require a greater drive from customer demand to consider purchasing ASM gold. Several jewelers may seek to comply with industry standards for recycled or standard gold to demonstrate their regard for responsible sourcing. Understanding the different barriers jewelers face will provide clearer direction for the program's target market and pilot design.

SOURCING ASM GOLD FROM THE DRC: BARRIERS AND REQUIREMENTS

BARRIERS

All market actors in the jewelry sector face barriers which disrupt their responsible sourcing endeavors or even discourage them from evolving their practices in the first place. Specifically, responsible sourcing here refers to sourcing responsible (including certified) ASM gold. Barriers may be obstacles which participants overcame or blockages which have not yet been addressed. Interviews with participants across the 5 jewelry categories revealed that most of their challenges can be grouped under 4 themes: financial and commercial viability, supply and product variety, market competition and mixed provenances, risk management and due diligence challenges. Each will be examined in turn.

Financial and commercial viability

Financial concerns featured in 27% of responses by participants, as price is reported to be a key barrier to sourcing ASM. The higher (above London Gold Fix[131]) and fluctuating price of certified gold currently is a challenge for some Designer Makers, especially with their limited cash flow, but most find that their business model enables them to absorb the cost or pass it on to consumers. As jewelry businesses increase in size, they are more likely to report the price as a key barrier to sourcing ASM. High Street Retailers/Jewelers experience much lower consumer interest in responsible gold and feel their typical customers would not pay a higher price for certified ASM jewelry. As they operate a large, multi-tiered supplier chain, selling products at mass market prices, financial margins are narrow. As such, sourcing ASM gold would not be a commercially viable option for many. For example, one high-street jeweler/retailer revealed his business would only pay up to 10% above the LBMA price, for responsible ASM gold. On the other hand, the higher cost of responsible ASM gold was not raised as a barrier by Luxury Jewelers. The refining and manufacturing costs are also higher with current certified ASM gold. Processing smaller batches of gold that need to be kept separate from other provenances is costly for Jewelry Manufacturers.

Supply and product variety

The lack of regular supply, limited availability and small volumes of available certified ASM gold represents significant barriers to jewelry market actors across all categories. Existing initiatives are mostly reliant on the production of a small number of mine sites. Jewelry Manufacturers, who distribute certified ASM gold to most Designer Makers and SMEs, describe a crowded marketplace for one brand of ASM gold ('Fairtrade'), where high demand and powerful buying entities make for an unpredictable and highly competitive market. Some described the sourcing as entering a 'merry-go-round' trying to secure batches from multiple traders, each time paying a premium.

Once purchased, the small volumes typical of ASM are costly to process for Luxury Jewelers and High Street Retailers/Jewelers and don't meet their volume requirements. They don't benefit from the 'economies of scale' principle. As one Luxury Jeweler expressed it, "we would buy responsible ASM gold if there was greater supply." Manufacturers manage to achieve commercial viability by selling multiple gold provenances and sharing the cost across the business. They can rely on steady client demand from Designer Makers and SMEs. A limited-edition collection in Fairtrade gold worked for one High Street Retailer/Jeweler, as part of their broader strategy to promote ethical and sustainable jewelry, but generally participants in these groups stated that these barriers were too great to overcome. One Luxury Jeweler requires gold of at least 75% purity, which they believe is harder to find in ASM provenances. Designer Makers reported that because it can sometimes take several weeks or months for an order of Fairtrade gold to arrive, they must decide promptly following notification of its availability whether they want to purchase it before it sells out. The majority persist with purchasing Fairtrade gold because the challenges of irregularity can be overcome by planning. They

also experience significant customer demand for Fairtrade and value the social and environmental impacts of the program.

Several Designer Makers also mentioned the challenge of finding certified ASM gold in all the colors, karats and mediums (chain, sheet, wire) they require. Jewelry Manufacturers offer a range but highlight the commercial unviability of selling products for which there is very limited demand; 14 karat gold apparently has limited appeal outside continental Europe and rose gold alloys are sold at an additional premium. Designer Makers may choose to combine gold provenances to overcome the limited range or, guided by their ethos of sustainability, choose to design jewelry within the constraints of available certified ASM gold supply. Supply and volume challenges are common in the ASM gold sector. Managing the volumes, quality and reliability expectations will need to be considered when supporting the trade and sourcing of ASM gold. Many smaller jewelers will have experience and some understanding of these constraints.

Market competition and mixed supply

Sourcing more than one supply of 'responsible' gold was identified as a challenge for over 50% of Designer Makers, one SME and some Jewelry Manufacturers. Responsible gold in this sense was described as ASM, not recycled gold. Some Designer Makers already source from both Fairtrade and Fairmined to meet their jewelry design requirements. However, the majority are very committed to the values of these initiatives and have invested in all the necessary processes to source from Fairtrade. They have expended considerable effort to comply with its requirements and emphasize the challenge of replicating the process for another ASM gold program. Several raised concerns that their company would find it challenging to market and communicate multiple ASM gold provenances to consumers. Fairtrade is a well-recognized, trusted, multi-commodity brand in the UK, and Designer Makers who sell jewelry using its gold identify the way in which it attracts new consumers. They describe the process of explaining the initiative to consumers as relatively simple because the brand already means something to them. Several have chosen not to incorporate Fairmined, even though they value the efficiency of the system, the premium given to mining communities and the greater variety of alloys they would have, because they know that its brand recognition is much lower among its British customers.

Those who already source certified ASM gold are not necessarily the best target market; their values fit CVCFG but many would directly compare the program's gold to existing initiatives. Given they are less likely to currently source ASM gold, High Street Jewelers/Retailers and Luxury Jewelers are not challenged by the 'multiple ASM provenances' prospective issue. Luxury Jewelers are also less constrained by supply chain costs than High Street Jewelers/Retailers and see a greater corporate social responsibility value to sourcing responsible ASM gold. Jewelry Manufactures are all accustomed to sourcing multiple forms of certified ASM gold but are wary of introducing an additional program which could be interpreted as a competitor to existing initiatives. These initiatives are well established and have earned largely positive reputations, yet, for larger manufacturers, still comprise a fraction of their gold sales. It would be challenging to persuade some participants from this category to take a chance on a new program that brings them little economic benefit. Like Designer Makers, the concerns for some manufacturers of sourcing multiple ASM gold streams are both financial and related to communications needed to differentiate them to customers.

Risk management and due diligence

Finally, perceived risks surrounding the ASM supply chain and due diligence concerns were raised as potential barriers by a handful of participants, primarily High Street Retailers/Jewelers (33%), Luxury Jewelers (100%) and Jewelry Manufacturers (33%). One

Luxury Jeweler and one High Street Jeweler were adamant that their board would be highly unlikely to approve the sourcing of ASM gold from the DRC. Larger brands who have already made public steps towards responsible sourcing, whether that be through RJC accreditation or publishing their supplier code of practice agreements, were much more likely to voice concerns regarding reputational risk. For High Street Retailers/Jewelers without responsible sourcing policies in place and limited traceability on existing suppliers, the CAHRA status of eastern DRC was not voiced as a barrier to sourcing. What is more, for many SMEs and Designer Makers, the historic and present-day challenges of the DRC, are a motivation to engage in an ASM gold supply chain originating from the country. Although there is limited awareness among participants of the specific actual risks in the country, they see the potential of a greater impact story from the program because of its context.

REQUIREMENTS

Participants across all jewelry categories shared requirements which the CVCFG program must consider for them to engage further with the program and purchase ASM gold from eastern DRC. The program must also recognize the distinct barriers jewelry market actors have faced hitherto and explore potential routes in designing the supply chain to overcome those which are surmountable. The sector's common key requirements can be categorized under the headings 'standards and initiatives', 'working with trusted partners', 'supply and cost', and 'branding and communications'. Each will be outlined in turn.

Standards and initiatives

For all Designer Makers and SMEs, the most important factors on which further program engagement depends relate to the level of responsibility, assurances, traceability and transparency provided by the program. Luxury Jewelers and Jewelry Manufacturers also gave high priority to these areas. All participants would require assurance that the program's gold is 'conflict free', broadly understood as gold not produced or traded in a conflict environment or warzone involving 'rebel groups'. A few remarked that 'conflict free' would represent a meaningful guarantee given the challenging context of eastern DRC. However, others associated the term with the Kimberley Process Certification Scheme for diamonds which has been severely critiqued over the years for its inability to address stakeholder concerns and the narrowness of its definition of 'conflict'. As one Designer Maker remarked, "Conflict-free gold can be a misleading term. It doesn't prove positive impact on issues broader than conflict." The majority would need to source ASM gold from the DRC that is "beyond 'conflict free'" to align more closely to their definition of responsible gold. As outlined in this chapter's introduction, respondents prioritize social conditions (68%) such as fair wages, workers' rights and community development, over environmental conditions (28%) such as mercury use reduction.

The most common questions addressed to the CVCFG program were: "Will there be a standard or certification, and what will it look like?" A variety of assurance types were suggested. Some would be content with a continuous improvement model, if the program were fully transparent. They would expect to receive frequent updates of progress against a clearly defined goal-orientated timeline. Most expect conformance to a standard or certification. They would value transparent documentation "as a reference point", especially in the early phases of the program as trust takes time to materialize. Several Designer Makers were critical of the multitude of standards and certifications in other commodities, implying that a lower requirement for CVCFG gold (vis-à-vis certified ASM initiatives) would translate to them as a "dilution of standards". Several Designer Makers and one Luxury Jeweler said they would only purchase the gold if it was certified by Fairtrade and prefer it when organizations work together to achieve greater impact. One Luxury Jeweler would only

consider sourcing if the ASM gold supply if the supply chain would comply with a standard that is cross-referenced by the RJC Chain of Custody standard. Several Designer Makers also asked if the program would consider stamping gold produced, for symbolic and traceability value.

Working with trusted partners

Many participants expressed the need to trust the program partners and implementers. As is often remarked upon, the jewelry sector is one highly reliant on networks of trust between suppliers. Designer Makers described how they do not ask questions of their current certified ASM gold supplier and initiative as they implicitly trust both parties. The values of a brand and historic trading relationships go some way to substitute for a fully traceable supply chain. For the majority of participants, it would be highly important to ensure their existing suppliers or like-minded and well-suited new suppliers are participants in the responsible supply chain.

For one SME, it would also be important to see private-sector industry engagement in the program, "not just NGOs" to demonstrate that others are "willing to invest [in] systemic change". Designer Makers are dependent on Jewelry Manufacturers selling the program's gold; most do not buy "lumps of gold" but manufactured gold sheet or wire. Equally, Jewelry Manufacturers highlighted that they would need a clear indication of downstream demand for them to consider stocking it. These findings suggest that the program needs to approach future engagement with market actors from a collective, not individualist, perspective. Fostering relationships with companies with a view of how they interconnect both by virtue of their supply chain and their values is important to increase both the likelihood of successful engagement in the short term and a sustainable supply chain in the long term.

Supply and cost

Designer Makers were the only participants who explicitly emphasized the importance of a regular and reliable supply of responsible gold. Given that these jewelers are most likely to currently source certified ASM gold, they are the most acutely aware of the challenges these supply chains encounter. They pointed to weaknesses in current programs and implied that a guaranteed regular supply of gold would be one way in which a CVCFG-supported supply chain could persuade them to consider purchasing from it. Poor availability of responsible ASM gold not only disrupts jewelry manufacturing but may also damage their customer relationships if they can't live up to promises made on their website ("If people know me for Initiative X gold, then it dries up, what do I say to them?"). On the other hand, most remain committed to existing initiatives despite periodic gold shortages, suggesting they may be willing to accommodate similar teething problems with CVCFG if other requirements are met. Several Designer Makers highlighted the need to have gold in multiple karats, alloys and mediums, and 2 suggested a point of differentiation from existing initiatives may be to offer something they do not; white gold chain, for example. Purity (above 75%) was only mentioned as a necessity for Luxury Jewelers. Over 90% of participants are prepared to pay above the London Gold Fix price, with larger companies (High Street Retailers/Jewelers and Luxury Jewelers) noting the narrowest margins (gold would need to cost less than 10% above London Fix which is an unrealistic target for the program until certain economies of scale can be reached). Price is not the number one concern for most smaller jewelers. Selling responsible ASM gold at a lower cost than existing certified ASM sources would not necessarily make it more attractive to Designer Makers and SMEs. Whilst some welcomed a cheaper option, others pointed out it may suggest that gold is "not as responsible" as that from existing initiatives. To overcome preconception of higher/lower prices, transparency on how the price is achieved, and what it means at the different stages of the supply chain, will be required.

Branding, marketing and communications

Participants were not asked for their views on marketing and communication, but some gave recommendations without prompting. One High Street Retailer/Jeweler stated that if they sold ASM gold they would "not talk about it, but just introduce it in a scattering of products". However, for most, the value of the program's gold would be in the impact story they could sell to consumers. According to one Designer Maker, the "project shouldn't underestimate the power of good marketing". SMEs and Designer Makers have been purchasing certified ASM gold since 2011, they have witnessed the pros and cons of different marketing approaches by both of the principal initiatives. They will need to be convinced to consider diversifying their gold supply chain by incorporating the program's gold; establishing a clear product voice and the right pitch is key. One Designer Maker complained of historically poor marketing by Fairtrade, pointing out that photos of mine sites and artisanal miners do not sell jewelry to consumers. Interestingly, following stakeholder consultation, Fairtrade have now pivoted away from imagery similar to that used in charity appeals. New consumer-facing literature includes photos of goldsmiths at work and condensed, more emotive language. Whilst consumers want to know their purchase has a positive impact upstream, the jewelry buying experience is still primarily about them and their story. Participants complained that initiatives had not until recently sought their guidance and one Designer Maker believed the growth of Fairtrade thus far can be largely attributed to word-of-mouth through small jewelers. For CVCFG, "jewelers would want to be involved in the story from the beginning". They know what storytelling would work with their customers. Designer Makers and SMEs report that at least 50% of the customers approach them initially for reasons other than their use of certified ASM gold and many go on to be convinced by their storytelling to purchase a 'responsible' piece of jewelry. Getting the branding, marketing and communications right for both jewelers and their clients is key to persuading them to purchase program gold. As one Designer Maker suggested, the aim is to "connect the metal with a positive story, besides provenance". The program should identify the unique selling point of its gold in collaboration with a collective of jewelry participants interested in engaging further with the program.

CONCLUSIONS, RECOMMENDATIONS AND OPPORTUNITIES FOR CVCFG

JEWELRY SECTOR ENGAGEMENT

91% of participants interviewed would like some form of future engagement with the CVCFG program. None were able to confirm if they would purchase program gold because they lack the information related to their key requirements. A handful expressed interest in gold purchasing if their requirements are met. 50% (11) of participants (high engagement), from across all jewelry categories, expressed willingness to contribute their time and knowledge to the program. 41% (9) would like to be kept informed of the program's progress via newsletters and social media. The latter group (low engagement) may yet wish to become more engaged in the program in the longer term as they witness its evolution. The table below provides further data.

Table 6: Overview of the potential jewellery sector engagement in the program

Jewelry Category	Participants	Low future engagement		High future engagement	
		Number	% of category	Number	% of category
Jewelry Manufacturers	3	0		2	66
Designer Makers	9	6	66	3	33
SMEs	5	1	20	4	80
High Street Retailers/Jewelers	3	1	33	1	33
Luxury Jewelers	2	1	50	1	50
Total	**22**	**9**	**41 %**	**11**	**50 %**

SMEs were the most likely, of all jewelry categories interviewed, to be motivated and able to contribute their time and knowledge to the program. Like Designer Makers, they value responsible sourcing and experience significant client demand for their current ASM gold jewelry. Unlike, Designer Makers, their businesses are more mature, larger and more diversified. It is therefore less risky for them to experiment with new responsible sourcing programs. Whilst all Designer Makers expressed an interest in some level of future engagement because they care about industry innovations regarding gold sourcing, the majority admit it would be hard to convince them to invest time and limited resources in a new unknown program when they are so committed to existing certified ASM initiatives. It is crucial that 2 out of the 3 Jewelry Manufacturers are willing to put a higher level of effort into future engagement with the program. Their engagement is fundamental to bringing the program's gold to downstream jeweler buyers. Finally, one Luxury Jeweler based in Switzerland expressed an interest in contributing time and knowledge to the development of the program.

Based on the further engagement indicators of the sample interviewed and the requirements highlighted, SMEs with an existing interest in responsible ASM gold should be the program's target market, alongside their suppliers, Jewelry Manufacturers. The market analysis will extend in the next phase to an additional number of Luxury Jewelers to more reliably determine if the program's gold would appeal to them.

- The best chance of getting jewelry stakeholders on board to ultimately purchase CVCFG-supported gold is to engage them more substantially in the program as early as possible. The program should adopt an approach that genuinely respects and incorporates where possible their advice and requirements. This will require ongoing engagement to enable participants to meet each other and build relationships of trust. Smaller jewelers would value seeing larger jewelers on board. Participants also require indicators of their downstream client demand for CVCFG gold to engage.
- Build a deeper understanding of participants' sourcing requirements and priorities.
- Share further information on the program, testing solutions and the feasibility of meeting their requirements.
- Expand interview outreach to other jewelers in Europe and the US with an interest in responsible sourcing. These would be Designer Makers, SMEs, Jewelry Manufacturers and Luxury Jewelers. Integrate interested participants into focus groups and newsletter mailing lists. The US market was highlighted by one Designer Maker as a logical target: USAID is the program funder and existing certified ASM gold initiatives are less well established there, though interest is decidedly growing through advocacy and promotion by organizations such as Ethical Metalsmiths, the Jewelry Industry Summit and the Chicago Responsible Jewelry Conference.

RECOMMENDATIONS FOR PILOT SUPPLY CHAIN DESIGN AND IMPLEMENTATION

- Assess the feasibility of upstream market actors meeting some of the downstream jewelry sector's responsible sourcing red lines. Combine with a jewelry participants' prioritization exercise to further refine their requirements.
- Define which standard of reference to use. The program should focus on engaging with companies who are content with a continuous improvement approach. CRAFT, as further detailed in chapter 6, could support a progressive approach to working with the ASM gold supply chain. The standard and/or certification is the number one priority of jewelers and could make or break the program's chances of engaging with them further.
- Explore different traceability models. Jewelers do not necessarily require a high-tech blockchain-style solution but would require full chain of custody and transparency, especially in the beginning, to build trust in the program. Prioritize honesty with downstream jewelers, over the temptation to gloss over some of the challenges on the ground.
- Aim for a post-refiner program gold price not beyond the medium-high range of prices for existing certified gold initiatives. It would price out most High Street/Retailer Jewelers, but they would be less motivated to source ASM gold from the DRC regardless of price. Keeping a higher price to allow for greater upstream capacity building offers a greater 'impact story' for jewelers and their clients. A cheaper gold with limited claims of responsibility will be hard to break into the market.
- Develop an estimate of likely annual volumes of supply. The anticipated supply will affect how many downstream buyers and mid-downstream market actors are required to create a regular flow of gold in line with demand. The market analysis suggests that most would consider the gold supported by the CVCFG program to be supplementary to existing suppliers, in order to manage the risks of sourcing it.
- Explore feasibility with Jewelry Manufacturers of producing a range of colors, karats and mediums in CVCFG gold. Most SMEs and Designer Makers do not buy casting grain or do their own alloying. They need wire, sheet, chain in a variety of karats and colors. The program needs to decide, following further market engagement, whether to encourage the manufacture of the most popular materials from its gold or focus on the gaps in the current certified ASM market.
- The known challenges of the DRC can be used to the program's advantage if it can demonstrate water-tight due diligence processes to ensure gold is 'conflict free' as a minimum. SMEs and Designer Makers see the greater story and impact potential of ASM gold originating in the DRC, in comparison to the provenance of other responsible ASM gold supply chains. Consultation with jewelers will be key to translating this message into effective marketing outputs, given that traditional imagery of Congolese mine sites have been demonstrated to be less appealing to jewelers and consumers.

TECHNOLOGY

The technology market, as classified by the World Gold Council, includes the electronics, other industrial and dentistry industries. As indicated in the scope and methodology of the first phase of the market analysis, this market has not yet been researched and further analyzed. Some initial discussions with 2 electronics global leaders provided the following insights.

- Identifying gold in the electronics supply chain is more difficult than in the jewelry sector, where the supply chain is shorter and the refiners and or manufacturers represent key actors. In the case of electronics products, the refiner is often placed between tier 3 and 6 resulting

in a different type of leverage and influence than an electronics company can have. As a result, electronics companies see the refiners as the target actors for purchasing ASM gold from the DRC.

- One of the companies is currently engaging with an NGO and another partner in an ASM gold project in Uganda and they have expressed interest in learning about other projects in other areas.
- The other company has been engaging with refiners in African countries even if they are aware of the challenges, the risks and the efforts required to avoid gold smuggling. They recognize how African refiners should be included in the outreach and consider engagement to be part of the project.

The next phase of the market analysis will focus on defining how to engage the technology market further and which priorities should be set.

BANKS AND FINANCIAL SERVICES

Banks and financial services represent another section of the market that will be one of the priorities in phase 2 of the market analysis. The research team has so far engaged one major international bank and through the interview it was identified that the motivations and role of banks in the gold trade needs to be further detailed and differentiated, based on the specific organization's focus and role in the supply chain. Banks and financial institutions can play the following roles:

- Buy gold from refiners
- Pre-finance gold supply chain operations in order to buy the gold afterwards
- Provide credit to other companies in the gold supply chain (e.g. refiners, traders, etc.)
- Insure gold supply chain operations (e.g. transport and logistics)

The market analysis phase 2 will build on this initial classification and aim to identify barriers and motivations for financial institutions to engage in the CVCFG program and play a role in a pilot initiative.

AEROSPACE

The US government has made a commitment to put a man and a woman on the moon by 2024. NASA is preparing for this mission, which will include the construction of technology that uses gold foil and potentially other gold products. Since international space treaties are governed with a commitment to global peace, and noting that the Hague Space Resources Program has identified equatorial countries as crucial potential allies in an ever expanding space industry[132], it may be politically coherent to use gold from a US government-funded program, intended to promote peace and stability in an equatorial country, in the technology being used for this future moon mission, where that helps stimulate the success of the program by establishing first sale, for example. The program should engage with NASA to scope this.

6 - LESSONS LEARNT FROM OTHER INITIATIVES

This chapter analyzes relevant ASGM supply chain initiatives, standards and certification schemes both in the DRC and globally and draws out lessons learnt that the CVCFG program should consider and apply going forward (for a full overview of global initiatives please see Annex II). As explained in the previous chapters, the definition of a standard and a clear supply chain model represent key motivations for mid-downstream companies to engage.

It is important to understand challenges and lessons learnt from the implementation of the above-mentioned initiatives, to foresee potential challenges and risks that CVCFG might face as well as strategies to mitigate those challenges. Given that challenges and lessons learnt are not readily available for all initiatives, this sub-section only summarizes some of the most important findings based on online research. Therefore, for phase 2 of the research the recommendation is to select a small number of initiatives for deeper analysis and to conduct interviews with these and potentially their stakeholders.

With regard to the CTC Scheme, BGR reported several challenges related to its implementation, which included: tackling complex organizational and institutional aspects, the limited capacity to enforce and apply the scheme, unsupportive legal structures, vested interests between ASM organizations, civil society, processing companies and politicians, and limited civil society and governmental capacity.[133]

Moreover, a report from 2018 made by STRADE (Strategic Dialogue on Sustainable Raw Materials for Europe)[134] pointed out further issues related to the CTC Scheme which included its 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.[135]

Fairmined also encountered challenges related to small scale operators, as well as challenges related to conflicts of interests and limited resources. Fairmined requirements and audits are rigorous, making it difficult for ASM organizations to comply unless they are supported by an external organization such as ARM.[136] Moreover, once mining organizations obtain the certification, they need to continue working hard to achieve recertification and develop, which is more demanding every year.[137] Some of the challenges that ASM organizations face in obtaining Fairmined certification and becoming recertified are[138]:

- **Production and cash flow:** since fixed export costs are high, ASM organizations are advised to wait until they accumulate volumes higher than 1kg of gold, which delays their revenue for longer periods of time. This is a serious challenge because even if Fairmined gold has a premium as an incentive, ASM organizations might prefer to sell locally in order to get immediate cash flow.
- **Limited resources** (human, administrative and technical) to comply with the standard.
- **Staying up to date with formalization processes, norms, politics and laws**. National mining legislation laws do not seem to account for the realities of ASM organizations in some countries, placing burdens upon ASM.
- **Economic and financial limitations to becoming certified and formalized** (tax and compliance costs). Fairmined auditing costs represent a burden for ASM organizations. Although organizations are advised to invest the premium for auditing purposes, the lack of financial planning is a clear challenge.

- **Technical deficiencies** to manage purchase offers and exporting logistics, as many of the mines are located in remote areas.
- **Different interests and incentives between miners and lack of confidence in new buyers.** Miners distrust new buyers, fearing that these will not pay after taking delivery of the gold.

Given the similarities of the Fairtrade and Fairmined models, it can be expected that Fairtrade had to overcome the same challenges as Fairmined. Both the Fairtrade and Fairmined models would be difficult for a typical DRC cooperative to achieve.[139] Moreover, these models do not offer miners any pre-finance scheme, which means that even if the gold is eligible for a premium, it might have already been pledged to a pre-financier outside of the system.[140] In Tanzania, Fairtrade plans to establish buying counters near production sites to avoid the pre-financing problem. However, due to the remoteness of the DRC's sites, this approach would not be possible.[141]

Similar concerns have been highlighted by Tetra Tech with regard to the implementation of the 'two-kilo gold' model in the DRC, including: challenges related to the remoteness of DRC mining sites, pre-financing difficulties given that there are more alternative sources of pre-financing in the DRC, and challenges related to monitoring of production levels to ensure that gold remains in legal channels.[142]

Initiatives previously set up in the DRC have had to overcome all these challenges and also encountered some others. For instance, BGR reported the following challenges with relation to the implementation of the Kampene project:

- Acceptance of the traceability scheme by supply chain actors. During the first month of implementation, BGR observed that traders were opposed to the system.[143] This challenge was resolved by combining support at a political level, and the involvement of mining cooperatives.[144] Support for the scheme was gained because the scheme did not create an artificial closed pipe; instead, it allowed existing participants, such as traders, to be integrated into its gold supply chain.[145]
- Complexity of the supply chain, and the lack of a comprehensive national registration system for all stakeholders involved in the supply chain, which makes it difficult for government authorities to evaluate the legal compliance of stakeholders.[146] BGR recommends creating a registration database at the national level to overcome this challenge.[147]
- Provincial and municipal level legal taxation systems that do not comply with the DRC national legislation dis-incentivize formalization.[148] In order to resolve this challenge, BGR suggests balancing taxation practices at the provincial, regional and national level, and estimate the benefits from indirect taxation from ASM mining and trade.[149]

Another project implemented in the DRC is Just Gold, which also faces several challenges. A report from Tetra Tech highlighted 2 main challenges related to the implementation of the Just Gold model, which are: the inability to convince small traders to sell the gold on to a legal comptoir, and the lack of a longer-term financing model for equipment and traceability. These issues were tackled by only providing technical assistance to miners if they sell the gold through the trading house registered with the project. The trading house sells the gold on to a partnering comptoir, keeping a small margin to pay for project costs, traceability, and maintenance, also giving 1% of that margin to community development projects.[150] Prices offered by Just Gold are competitive with those offered by other traders.[151]

And finally, lessons learnt and challenges of the Bwenge Buchiza project implementation in the DRC reported in their quarterly report include: ensuring that the government and the cooperative pay staff

to be on site every day to monitor compliance and traceability, applying procedures correctly and submitting data to Bukavu on time, challenges faced by Fair Congo (the exporter), and securing a stable production of gold from the site.[152] STRADE also highlighted that the biggest challenge of the Better Gold Initiative was to deal with ASM uncertainties and supply chain fluctuations in a sector where industries traditionally rely on a steady supply chain.[153]

LESSONS LEARNT AND RECOMMENDATIONS FOR CVCFG

This chapter shows that many responsible sourcing business models are typically applying a closed pipe supply chain, which is characterized by shorter supply chains with close cooperation by key actors only, ensuring traceability and legal conformity. This finding was also observed by BGR, which stated that a closed pipe system provides more rigorous monitoring and improved risk management.[154][155] Some clear examples of ASGM standards for responsible closed pipes are Fairtrade and Fairmined, which apply a premium price to certified responsible gold. However, as noted by some refiners interviewed by BGR, the premium price cannot be absorbed by refiners internally, and so it is only economical if it can be passed on to the end-user.[156] These refiners interviewed by BGR considered that a successful responsible supply chain is one that manages to conform with international regulations and be economically sustainable for all actors in the chain.[157] As such, to achieve a successful responsible supply chain, CVCFG should consider:

- **Following internationally recognized standards** but being aware of local realities and context in the DRC (i.e. remoteness of sites, political instability, conflict). Some standards' requirements are too rigorous for ASM organizations in the DRC to comply with currently, including CTC, Fairmined and Fairtrade.
- **Understanding that conforming with the OECD Due Diligence Guidance should be the bare minimum** to start with. Having a longer-term vision that goes beyond the OECD is very important to support the production, trade and sourcing of responsible ASM gold. A few standards and audit schemes go beyond the risks captured in the OECD DDG Annex II, and include further environmental, and health & safety considerations. CRAFT for example has already developed a section of risks to be considered beyond OECD DDG Annex II.
- **CRAFT, however, is ideal for miners that cannot attain top-level fair standards**, because its objective is to enable progressive improvement and shared responsibilities by miners and buyers. Therefore, the research suggests that CVCFG considers applying CRAFT.
- **Understanding the complexity of the DRC's gold supply chain**, **and complex organizational and institutional aspects**. BGR reported that there is no national comprehensive registration system for all stakeholders involved in the chain and recommends creating a registration database at a national level. BGR also reported that provincial and municipal level legal taxations that do not comply with the DRC national legislation de-incentivize formalization. In order to resolve this challenge, BGR suggests balancing taxation practices at the provincial, regional and national level, and estimate the benefits from indirect taxation from ASM mining and trade.
- Consider the potential issues with respect to different interests and incentives of miners, ASM organizations, civil society, companies and politicians.
- **Finding incentives for all actors in the supply chain to comply with regulations**. For upstream users, these incentives can be offered by providing equipment to increase their production (e.g. two kilo gold model), their revenues (e.g. Fairtrade), or their development (e.g. Fairmined). Midstream and downstream users' incentives mainly relate to ethics, CSR,

and effective publicity opportunities for marketing, especially for the jewelry sector (see Jewelry section in chapter 5). Therefore, it is very important for CVCFG to think about storytelling.

- **Addressing challenges related to limited resources (human, financial, technical and administrative)**, such as technical deficiencies related to managing purchase offers and exporting logistics, as many of the mines are located in remote areas, staying up to date with the formalization process and regulations, and economic difficulties with becoming audited, among others.
- **Dealing with ASM production fluctuations and supply chain uncertainties** is very important, as midstream and downstream actors traditionally rely on a steady supply chain.
- **Addressing challenges related to limited civil society and government capacity** to enforce the program and monitor processes to ensure that gold remains in legal channels.
- **Being aware of the potential lack of confidence from actors in the supply chain in the CVCFG model**. Other initiatives found it difficult to convince small traders to sell the gold on to a legal comptoir; establish trust between ASM miners and new buyers and build acceptance of the traceability scheme.
- **Building legitimacy**, by communicating very clearly the claims being made, as well as by seeking international recognition of the program by industry associations (e.g. RMI).
- **Being aware that a premium model for ASM miners might not work in the DRC**, because of the high number of alternative sources of pre-financing in the DRC, which means that even if the gold is eligible for a premium, it might have already been pledged to a pre-financier that is not part of the system.
- **Giving thought to the long term financial and development model of CVCFG's program**, especially when external support leaves. For this it will be very important to work closely with all actors to find the right incentives for each of them along the supply chain. Although this consideration is at the core of the CVCFG program, it has been identified that many previous initiatives have tried and did not manage to follow through by the end of the implementation period. For this reason CVCFG should consider an approach that closely monitors how the ASM gold supply chain model is developed and how sustainable it is likely to be in the long term.

7- CONCLUSIONS, KEY FINDINGS AND RECOMMENDATIONS FOR CVCFG

The previous 4 chapters have presented the detailed outcomes of the market analysis so far and each chapter concluded with focused recommendations based on the supply chain stage and the existing and recognized international, regional and national standards in the DRC. This chapter draws some of the conclusions and recommendations together to guide the next stages of the project.

BEYOND CONFLICT-FREE: RESPONSIBLE GOLD

For ASM gold from DRC to be marketed as 'responsible' internationally, risks and issues beyond those linked to conflict and commercial viability need to be considered. These include environmental and social impacts, notably the use of mercury, land degradation, child labor and broader working conditions and economic opportunities for all actors in the supply chain, especially those with smaller leverage such as miners.

The desk research and stakeholder interviews clearly show that both downstream and upstream actors want to source gold that is more than conflict-free to be in line with emerging norms captured in new international standards and expectations mid-downstream. Compliance with the OECD DDG is considered to be the absolute minimum requirement to access the international market, but it is likely that compliance with all criteria will only be possible by working on a journey of continuous improvement. The CVCFG program shall therefore take into account 3 specific elements:

1) **How do standards and regulations define responsible gold**, and which are most applicable to the CVCFG program? (See the next recommendation on standards for further guidance).
2) Market expectations and due diligence requirements.
3) The actual context in the DRC, including upstream market actors' needs and expectations, actual risks, and feasible mitigations in the short, medium and long-term.

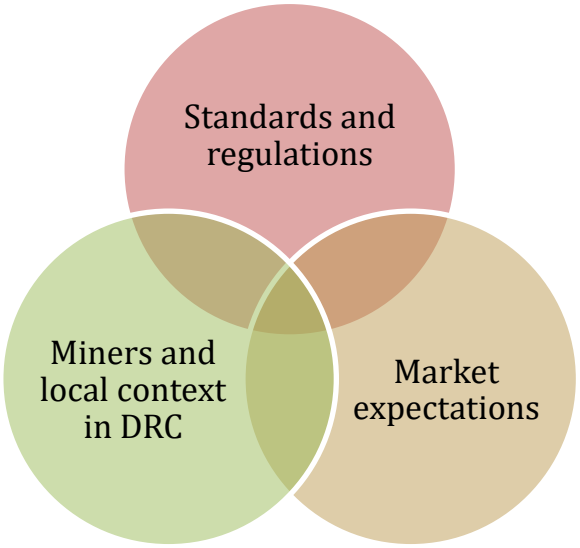


Figure 3 Venn Diagram - defining responsible gold

This market analysis has covered the first 2 points at this stage, however a full assessment should be completed by running a proper upstream market assessment. (For further details see the recommendation on the upstream market assessment).

STANDARD IMPLEMENTATION

One potential solution is to use CRAFT, given its international recognition, focus on ASM and progressive improvement approach.

This would have the following advantages:

- A step-by-step due diligence approach that already allows for conformant (meeting the minimum requirements) gold exports.
- Taking an approach that, while built on the OECD DDG, is tailored to ASM gold supply chains specifically.
- Supporting progressive improvement over time in areas that go beyond the OECD DDG Annex II risks, in line with the broader expectations on responsible gold.
- Enhancing the credibility of the program, considering that the CRAFT code is an internationally recognized initiative which has been endorsed by several actors in the sector (e.g. OECD, some gold refiners).
- Guiding the definition and implementation of due diligence (refer to the following recommendation).

The CVCFG program needs also to consider how the desired impact through the program implementation contributes to the UN Sustainable Development Goals (SDGs) and/or mitigates potential negative impacts. Looking at the interventions and progress made through the SDGs would align the program efforts to the broader 2030 sustainable development agenda. Notably, more and more private sector organizations are also looking at measuring their activities and impact against the SDGs.

UPSTREAM MARKET SYSTEM ASSESSMENT

An upstream market system assessment will be carried out to complement the research done during the first phase of the market analysis and provide a proper understanding of the status of the ASM gold sector in the DRC.

An assessment of existing actors, risks, dynamics, and regulations will inform the decision regarding the supply chain model and contribute to the selection of sites and actors to engage and support through the CVCFG Program. In addition, it is essential to identify and highlight the needs and expectations of one of the main beneficiaries and target groups of the program, namely ASM gold communities and miners. Such an assessment will cover and collect a broad range of information including production and volume predictions, risks, incidents, stakeholders needs and expectations. The assessment would also inform the definition of responsible gold as discussed above.

UPSTREAM TO MID-DOWNSTREAM CONTINUOUS LINKAGES

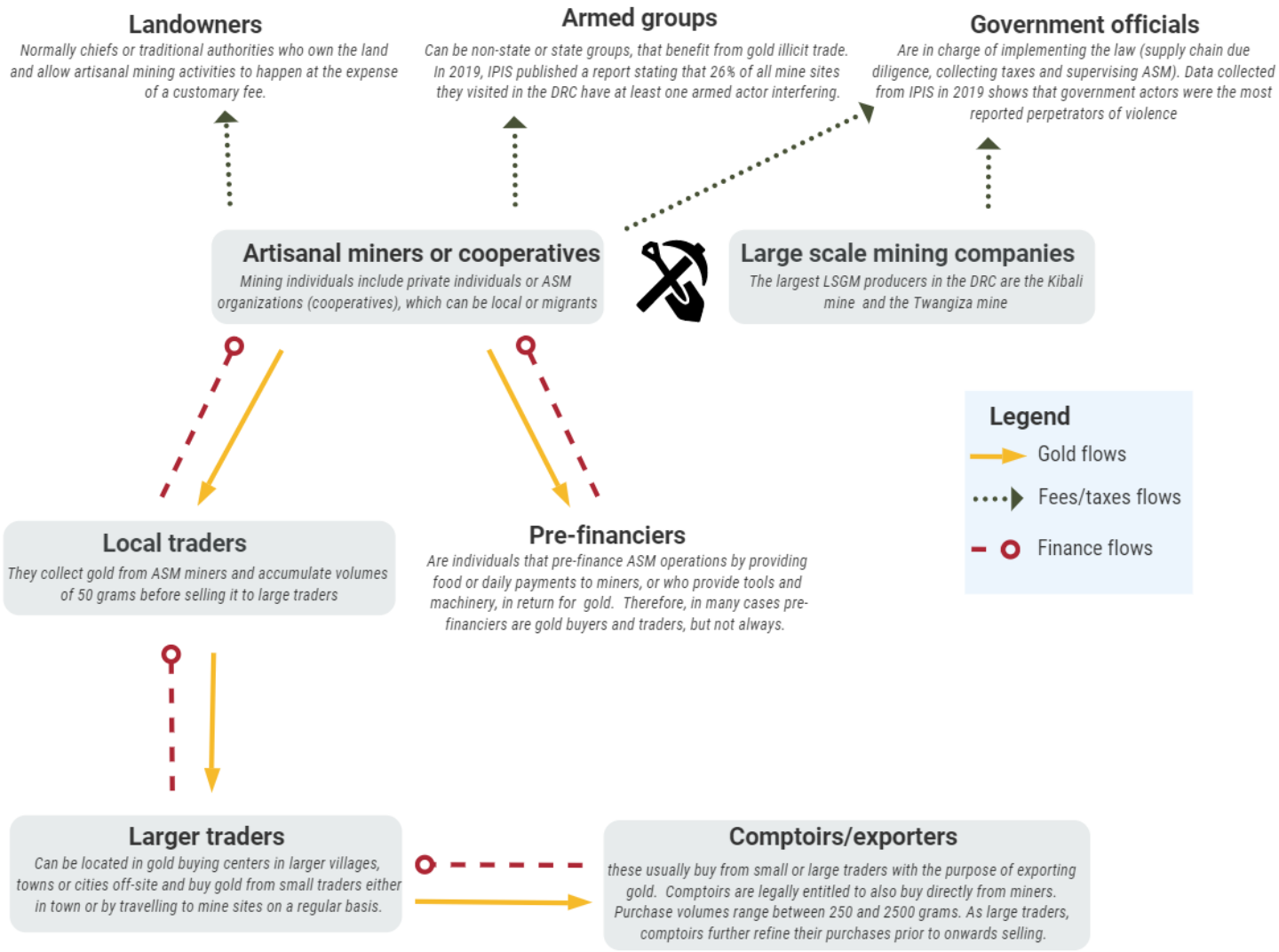
For the program to succeed, the team must ensure that the supply chain is considered in its entirety and not as 3 disjointed sections (e.g. upstream, mid-stream and downstream) which have no linkages and no interaction. Promoting a responsible supply

chain presumes that these linkages are fostered and vetted by allowing transparency and information on the challenges, successes, and positive impacts both achieved and desired.

ADAPTIVE MANAGEMENT

Considering that CVCFG is intended to be private sector-led, this market analysis has emphasized that engaging market actors should help keep the program grounded in the market reality. As a result, Levin Sources will conduct regular "**market check-ins**" to integrate any feedback from market actors in the implementation of the program, and adapt activities and strategies as required. This will also be an opportunity to inform and influence the market.

ANNEX I: UPSTREAM ASM GOLD SUPPLY CHAIN ACTORS



ANNEX II: OVERVIEW OF ASGM SUPPLY CHAIN INITIATIVES GLOBALLY

The table below summarizes the findings of other ASGM supply chain initiatives present worldwide that are relevant for the CVCFG project, most of these initiatives are voluntary, with the exception of the RJC's Code of Practice, which is mandatory for RJC's members. These international initiatives have been classified by guidance documents, standards and certification schemes, and other supply chain programs. More detailed information can be provided upon request.

Guidance Documents

Note that the guidance itself does not specify or present a specific model, therefore information on payment of due diligence costs and progressiveness is not included.

Initiative	Developed by	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
OECD Due Diligence Guidance	OECD	Upstream, Midstream, Downstream	The OECD Due Diligence Guidance explains how companies can identify and manage risks encountered throughout the supply chain. Important features of the Guidance include[158]: - Annex II of the guidance sets out the risks of sourcing minerals from conflict-affected and high-risk areas. - The Gold Supplement that sets out measures to create opportunities for ASM. The conditions stated by the guidance, in which a company can buy ASM gold are: if ASM activities are legitimate, if due diligence is carried out, and if risks identified are managed.	Leading voluntary international standard referenced in a range of declarations, regulations and initiatives. The CVCFG program should address the risks mentioned in the Annex II of the guidance and be in line with the conditions stated in the Gold Supplement. Risks mentioned in Annex II are considered as the minimum requirements to be addressed by many supply chain actors.
LBMA Responsible Sourcing Guidance	London Bullion Market Association (LBMA)	Midstream, Downstream	The LBMA Responsible Sourcing Gold Guidance sets requirements for refiners producing LBMA Good Delivery gold bars to combat human right abuses, avoid conflict, and comply with high standards. Refiners are asked to use the LBMA Toolkit to implement the guidance requirements.	The guidance follows the 5-step framework of the OECD Due Diligence Guidance and CVCFG project should be aware of it. It is generally easier for a company to source ASM gold and get certified by LBMA than it would be with the RJC Code of Practice (CoP).[159]. If the CVCFG project is willing to engage LBMA refiners, then the requirements of this guidance should be addressed in the implementation of the project.

Initiative	Developed by	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
ICMM Responsible Sourcing Guidance	International Council on Mining and Metals (ICMM)	Upstream	This voluntary guidance has been drafted to provide ICMM and its members (mineral and metal companies, metal and mining associations) with advice on responsible supply practices.[160] The guidance intends to demonstrate good practice without being prescriptive.[161]	This guidance is more relevant to LSM companies than to ASM, as such it is not very relevant for CVCFG at the moment.

1. STANDARDS AND CERTIFICATION SCHEMES

Initiative	Developed by	DD costs paid by	Progressive	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
Responsible Minerals Assurance Process (RMAP) **(Formerly Conflict Free Smelter Program)**	RMI	Midstream	No	Midstream	RMAP Standard uses an independent 3rd party assessment to validate conformance with the due diligence management systems set by the Standard.[162] RMAP is in line with the OECD Due Diligence Guidance and is based on a risk-based assessment program for smelting and refining facilities in 3TG and cobalt supply chains.[163] Although RMAP is for midstream, RMI also launched a downstream audit program due to requests from downstream companies.[164]	Given the recognition of RMI and the number of midstream and downstream companies that are willing to participate in RMAP, it would be good for CVCFG to be aligned with RMAP.
Fairmined Gold	ARM	Downstream	Partially (entry-level requirement – progressive compliance)	Upstream	The Fairmined Gold Standard is a 3rd party certification and audit system that includes requirements for ASM organizations to perform responsible practices in terms of social, organizational and economic terms.[165] The standards also include terms for brands to become Fairmined licensees and for entities to become Fairmined authorized suppliers.[166] Fairmined standard uses a premium as a market incentive to cover certification costs and investment in social development, environmental protection and mining operations.[167]	Fairmined standard entry-level requirements and audits are rigorous and difficult to achieve for ASM organizations, especially in the DRC context. Moreover, once mining organizations obtain the certification, they need to continue working hard to achieve recertification and develop, which is more demanding every year. Although it might not be applicable to CVCFG, considering the standard

Initiative	Developed by	DD costs paid by	Progressive	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
						requirements is relevant to manage expectations of market actors who are already familiar with Fairmined.
Fairmined Ecological Gold	ARM	Downstream	No	Upstream	Fairmined Ecological Gold includes those terms plus the guarantee that mining practices do not use mercury or cyanide to extract gold. [168] It is also based on a premium model paid by costumers, which guarantees ASM miners receive a fair price for the minerals, to cover certification costs and investment in social development, environmental protection and mining operations.	For the same reasons as with Fairmined Gold, with added requirements on environmental protection, compliance with the Fairmined Ecological Gold Standard seems too ambitious for CVCFG at the moment.
Fairtrade Gold	Fairtrade	Downstream	Partially (entry-level requirement – progressive compliance)	Upstream	Similar requirements and certification/audit process as Fairmined. It uses a premium as a market incentive to cover certification costs and investment in development. Fairtrade offers a premium 5% above LBMA, which compensates for the 2% tax, and therefore it is advantageous in comparison to illegal market. [169]	Idem as Fairmined gold standard, entry-level requirements are very demanding and difficult for ASM organizations to achieve. Moreover, as found in Fairmined, the system does not offer miners a pre-finance scheme, which means that even if gold is eligible for a premium, it might have already been pledged to a pre-financier that is not part of the system. As for Fairmined, considering the market positioning of the Fairtrade brand, being aware of the standard requirements is relevant to manage expectations of market actors who are already familiar with Fairtrade.
Ecological Fairtrade Gold	Fairtrade	Downstream	No	Upstream	Same requirements as Fairtrade Gold including guarantee that mining practices do not use mercury or cyanide to extract gold. Same premium model as Fairtrade Gold Standard.	Seems too ambitious for CVCFG at the moment for the same reasons as Fairtrade and Fairmined Standards.

Initiative	Developed by	DD costs paid by	Progressive	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
CRAFT Code	ARM, Resolve	Downstream	Yes	Upstream	CRAFT aims at facilitating engagement of the downstream actors with upstream actors at the point where OECD DDG risks are mitigated. The CRAFT Standard includes risks beyond Annex II of the OECD Due Diligence Guidance. CRAFT code is developed under Creative Commons open source license terms. So, it can be used by any ASM miners without costs and co-exist with other assurance schemes – reducing the additional 'audit burden' and simplifying due diligence.[170]	CRAFT looks like the most complete and comparable to the expectations of the market. It might be feasible to implement in the DRC and applicable to the program, given that it is open-source and based on progressive improvement. As such, compliance can be reachable for ASM miners in the DRC.
Dubai Good Delivery (DGD) Standard	Dubai Multi Commodi-ties Centre (DMCC)	Not specified	NA	Midstream, downstream	DMCC DGD Standard and responsible sourcing initiative is a voluntary certification standard that serves as a benchmark and guidance for responsible sourcing of gold in line with the 'DMCC Rules for Risk-Based Due Diligence for Gold and Precious Metals. [171] These DMCC rules include the DMCC Practical Guidance for Market Participants in the Gold and Precious Metals Industry and the DMCC Review Protocol.	The DMCC standard follows the same 5 step approach of the OECD Due Diligence Guidance. Compliance with the DMCC Rules ensures mandatory implementation of the OECD Due Diligence Guidance. The CVCFG due diligence approach should align also with this standard.
RJC's Code of Practice	Responsi-ble Jewellery Council (RJC)	Not specified	No	Upstream, Midstream, Downstream	The RJC Code of Practice (CoP) focuses on supply chain issues, such as human rights, business ethics, social and environmental performance, etc. [172] The code has been adopted by many mid- and downstream actors including 537 manufacturers, 370 diamond cutters and polishers, 61 retailers, and some big refiners, the implementation of the CoP at the upstream level is more limited.[173] Gold miners are only represented by 4 modest companies in Latin America. [174]	The code of practice is one of the most complete standards implemented because it looks at all impacts across all levels of the value chain. However, the code has a minor representation in gold mines and smaller SMEs have difficulties in implementing it. Moreover, the CoP is focused on the supply chain and currently restricts the possibility for sourcing gold from ASM unless it is done through an RJC member, or from ASM operators recognized as responsible mining

Initiative	Developed by	DD costs paid by	Progressive	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
						(currently, RJC only recognizes Fairmined as a responsible mining standard).[175] While the RJC certification could be considered for supply chain actors willing to source ASM, considerations of costs/benefits should be carried out carefully.
RJC's Chain of Custody	Responsible Jewellery Council (RJC)	Not specified	No	Upstream, Midstream, Downstream	The RJC Chain of Custody focuses on the flow of minerals through the supply chain. The standard requires companies to have a risk management framework and policy in line with the OECD Due Diligence Guidance. [176]	The CVCFG due diligence approach could be aligned to the RJC Chain of Custody to potentially engage companies who are already applying the standard.
Conflict-free Gold Standard	World Gold Council (WGC)	Upstream, Midstream	No	Upstream, Midstream	The Standard helps to operationalize the OECD Due Diligence Guidance, providing a common approach for gold mining companies to provide assurance that gold has been responsibly mined. The standard is designed to be implemented by member companies of the World Gold Council and other entities that extract gold (including ASM), and to support refiners in meeting requirements. [177]	Although the Conflict-Free Gold Standard can be applicable to ASM, it contains very demanding requirements that may be beyond most of ASM mining organizations capacity.
Responsible Gold Mining Principles	World Gold Council (WGC)	NA	NA	Downstream	These principles are a newly released framework that set out what constitutes responsible gold. The Principles have been created to integrate leading standards that already exists.	Although the principles mainly apply to LSM, they are another example of how standards and audit schemes are now going beyond the OECD DDG Annex II, and include further considerations.

2. OTHER INITIATIVES AND PROGRAMS

Initiative	Developed by	DD costs paid by	Progressive	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
Two kilo Gold model	Artisanal Gold Council (AGC)	Not specified	No	Upstream	In this model, AGC provides an integrated processing plant that improves significantly local methods of production and is mercury-free, AGC also provides training on the maintenance of the equipment. [178] The mine owner/cooperative needs to pay back for this system with 2kg of gold via legal sales. [179] There is also the option to pay 3kg of gold via legal sales to fund specific community projects. [180] Part of the model also involves the establishment of an exporter that can export gold legally, offering, therefore, a closed pipe model. [181]	Although implementation of this model has proved successful in Burkina Faso, implementation of such model in the DRC would be challenging because of the remoteness of the DRC mining sites, the system would compete with more alternative sources of pre-financing, and production would need to be monitored to ensure that gold remains in legal channels.
Lake Victoria Program	Impact Facility	Not specified	Yes	Upstream	The Lake Victoria Gold Program is an initiative to scale the supply of responsible ASM gold in Tanzania, Uganda and Kenya.[182] The Impact Facility invests in mines in those countries together with local partners.[183] The program incentivizes progressive improvement of ASM operations, from meeting the OECD Due Diligence Guidance to meeting Fairtrade / Fairmined Certifications.	The progressive model of this program could be used by CVCFG, but tweaking some of the requirements, as some requirements might be too ambitious in the context of the DRC.
Better Gold Initiative	Swiss Better Gold Association	Not specified	No	Upstream	The Better Gold Initiative is a private-public partnership between the Swiss Better Gold Association and the Swiss State Secretariat for Economic Affairs.[184] The project aims to connect ASM operations to Swiss refiners directly, while increasing transparency, responsibility and profitability along the value chain of gold.[185] Due to the VAT exemptions and the fewer intermediaries, the Initiative offers ASGM miners with clear financial incentives.[186] The Better Gold Initiative is currently active in Peru, Colombia and Bolivia. [187]	The shortening of the supply chain by this initiative was well received by the market and has led to ASM miners getting a higher price for their gold. [188] However, this initiative found challenging to deal with ASM production uncertainties and supply chain fluctuations in the sector. [189]

There are also a few non-mining related standards and certification schemes that are important for the CVCFG program to be aware and aligned with, including:

- **UN Guiding Principles on Business and Human Rights**: these are a set of guidelines for companies and states to prevent, address and remediate human right abuses.
- **UN Sustainable Development Goals (SDGs):** these are a set of objectives to achieve a better and more sustainable future for all. There are 17 SDGs in total, one of which, SDG 12, sets targets for a responsible consumption and production of resources. The CVCFG team could consider integrating the SDGs more substantially in its theory of change and monitoring and evaluation approach to collect data that would show how the program is contributing to the achievement of the goals. In order to do so, an analysis of the program against the SDGs and the specific targets is required.
- **World Fair Trade Organization (WFTO) Principles:** These are principles that fair trade organizations need to follow, including: opportunities for disadvantaged workers, transparency & accountability, fair trade practices, fair payment, no child or forced labor, no discrimination, gender equality, freedom of association, good working conditions, capacity building, promote fair trade, and respect for the environment.

OVERVIEW OF ASGM SUPPLY CHAIN INITIATIVES IN THE DRC

The table below summarizes the findings of all the ASGM supply chain voluntary initiatives present in the DRC. More detailed information can be provided upon request.

Initiative	Developed by	DD costs paid by	Progressive	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
Better Mining **(former Better Sourcing Program (BSP))**	RCS Global	Upstream (exporters)	Yes	Midstream Upstream	Better Mining is a certification and a private sector technology-based real-time information sharing solution applicable for LSM and ASM.[190] It validates supply chains against 16 key criteria, which are in conformance with the OECD Due Diligence Guidance. Better Mining currently focuses on supply chains from the DRC and Rwanda.[191] In the DRC, Better Mining has implemented an ASM gold closed pipe pilot, that has not yet produced exports.[192]	Better Mining requirements were third-party audited by BSR and fully compliant with the OECD Due Diligence Guidance, and RMI recognized their conformance with the RMI (RMAP) smelter audit program. RCS Global also claims that Better Mining is aligned with CRAFT and can be validated against any standard and/or legislation. CVCFG could claim the same and to ensure legitimacy, CVCFG's project could also be audited against conformance with the OECD DDG and seek recognition from stakeholders.
Certified Trading Chains	BGR	Midstream and Downstream	No	Upstream	The CTC scheme compiles a set of standards that focus on traceability and transparency, labor and working conditions, security, community development; and environmental protection. Smelters and downstream companies provide support to the upstream to implement the twin-audit. In turn, they benefit from improved security and knowledge of their suppliers.	The CTC scheme is feasible to implement, but there have been limitations to its applicability for ASM. Larger operators tend to get certified, but not small ones. There are no clear incentives for participants to join CTC, and limited capacity to apply and enforce the scheme.
Just Gold	IMPACT	Not clear	No	Upstream	Just Gold is an initiative by IMPACT to implement a responsible ASM gold supply from the DRC (Orientale Province, South Kivu). IMPACT supports ASM miners to enter the formal economy, and works with actors along the supply chain to create incentives for legal	The Just Gold model encountered 2 main challenges related to the inability to convince small traders to sell gold onto a legal comptoir, and the lack of longer-term financing

Initiative	Developed by	DD costs paid by	Progressive	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
					sales.[193] IMPACT supports ASM miners in better exploitation techniques and equipment, and, in return, miners sell their produce to legal buyers.[194]	model.[195] CVCFG should be aware of these issues and understand what measures the Just Gold program put in place to tackle those challenges.
Kampene Gold Traceability Project	BGR	Not clear	No	Upstream	Kampene is a pilot initiative to establish a responsible ASM gold supply from Kampene, located in the Maniema province, Pangi Territory, in the DRC. The Kampene project aims to install a traceable, transparent and responsible supply chain and was included in the national Certified Trading Chains (CTC) scheme, although due to the lack of a traceability system for ASM gold at its current stage of the project, Kampene does not qualify for CTC.[196]	The Kampene project reiterates how the CTC scheme would be difficult to implement in an ASM context in the DRC. Lessons learnt from the Kampene project should be taken into account by CVCFG.
Bwenge Buchiza Project	USAID funded, managed by Tetra Tech & supported by the RAGS Forum	Not clear	No	Upstream	This initiative is part of the Capacity Building for Responsible Mineral Trade (CBRMT) project, which aims 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.[197] More specifically, this responsible gold pilot is located 64 km southwest of Bukavu.[198] CBRMT project established the first conflict-free supply chain from South Kivu, DRC to American consumers.[199] The gold is exported by Fair Congo, processed by Asahi Refining in the US, manufactured by Richline Group and sold through Signet Jewelers.[200]	There are many lessons learnt from this project that could be applied to CVCFG. USAID published a report with the challenges that Bwenge Buchiza encountered to date, which are important to take into consideration for CVCFG.[201].A detailed analysis of thees challenges should be embedded in the design and implementation of the CVCFG, including engagement with stakeholders involved in the Bwenge-Buchiza Project.
Contingent ZEA	DRC's government	Upstream	No	Upstream	This model is not operational yet in the DRC.[202] A contingent ZEA is a model in which the government of the DRC grants ZEA on the condition of achieving certain performance goals (i.e. a certain volume of produced and exported gold legally).[203]	It is not completely known if upstream actors would be prepared to bear the full costs of traceability.[204] Interviews made by Tetra Tech to ASM miners show that they are willing to pay for these costs in return to land tenure and peace.[205] Although

Initiative	Developed by	DD costs paid by	Progressive	Applicable to	Scope, Requirements & Value Proposition	Relevance to CVCFG
						this assertion needs to be tested in practice.[206] Tetra Tech also found that independent traders and pre-financed traders are not willing to pay for a price increase.[207] As such, a legal comptoir would be needed to finance traders.[208] If CVCFG is willing to implement such a model, it would need to closely work with the government of the DRC.
Concession Holder - Cooperative	LSM company	Upstream (LSM)	No	Upstream (ASM)	In this model, a concession holder (e.g. LSM company) would give a cooperative the right to work on its concession in return of a production share.[209] The concession holder would be responsible for traceability and monitoring costs, which should be partly paid from the production share.[210]	If CVCFG decides to follow this model it would need to work closely with an LSM company, for this to work it is very important to choose the best located mine. This approach could also fit with the existing considerations of working with anchor institutions. Further assessment and stakeholder engagement is required to detail the model, its advantages and challenges to assess applicability to CVCFG.

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