



Wyss Academy and CDE Report 1

# Are the markets ready for responsible gold from artisanal and small-scale miners?

An investigation with a focus on the Swiss market and gold from the Amazon

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## **Publisher**

Wyss Academy for Nature at the University of Bern, Kochergasse 4, 3011 Bern, Switzerland. [info@wyssacademy.org](mailto:info@wyssacademy.org).

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## **Citation**

Burger, Martina, Elisabeth Bürgi Bonanomi, Camilla Steinböck, Fernando Fernandez, and Julie G. Zaehring. 2025. "Are the markets ready for responsible gold from artisanal and small-scale miners? An investigation with a focus on the Swiss market and gold from the Amazon." Wyss Academy and CDE Report No. 1, Wyss Academy for Nature and Centre for Development and Environment, University of Bern.

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Recommended citation of the report: Burger, Martina, Elisabeth Bürgi Bonanomi, Camilla Steinböck, Fernando Fernandez, Julie G. Zaehring. 2025. "Are the markets ready for responsible gold from artisanal and small-scale miners? An investigation with a focus on the Swiss market and gold from the Amazon." Wyss Academy and CDE Report 1. Bern, Switzerland: Wyss Academy for Nature and Centre for Development and Environment, University of Bern.

# Contents

<b>Executive Summary</b>	<b>4</b>
<b>1 Motivation &amp; research questions</b>	<b>5</b>
<b>2 Setting the scene</b>	<b>7</b>
2.1 ASGM: Dynamics, scope & impacts .....	7
2.2 Our case study: The ASGM value chain in Madre de Dios.....	8
2.3 Governance schemes in downstream markets to foster sourcing of clean gold.....	11
<b>3 Literature review</b>	<b>13</b>
3.1 Swiss market .....	13
Public discourse .....	13
Demand for clean ASM gold .....	14
Amazon ASM gold in Switzerland .....	15
3.2 International markets .....	16
Global gold imports and responsible sourcing trends.....	17
ASM gold in the North American market .....	17
Emerging gold markets – India and the UAE .....	18
Lessons from Germany .....	19
Effectiveness of certification schemes .....	20
<b>4 Interviews with key stakeholders in the Swiss gold market</b>	<b>21</b>
4.1 Methodology .....	21
4.2 Results.....	22
Investments in the ASGM value chain .....	22
Motivation.....	22
The role of end consumers.....	23
Public regulations.....	23
Recycled gold.....	24
Sourcing in Madre de Dios.....	24
Hindering & enabling factors .....	25
<b>5 Conclusion</b>	<b>28</b>
<b>6 Lessons learnt</b>	<b>29</b>
<b>References</b>	<b>33</b>
<b>Appendix</b>	<b>40</b>

# Executive Summary

This report explores the readiness of Swiss intermediary market actors – refineries, watchmakers, jewellers, and banks – to engage with responsibly sourced artisanal and small-scale mining (ASM) gold. The study examines their willingness and capability to accommodate the additional costs and efforts required for ethical sourcing and investigates broader market trends influencing their decisions.

## Key findings:

- **Growing but cautious interest:** Some Swiss market actors exhibit a shift towards responsibly sourced ASM gold. While some are increasingly willing to integrate ASM gold into their supply chains despite considerable financial and other burdens, cost considerations, certification challenges, supply chain transparency and the tainted public perception remain barriers that prevent a widespread integration.
- **Motivation:** Companies are motivated by a combination of political pressures and ethical considerations. Additionally, diversifying gold supply sources is seen as a strategic advantage.
- **Role of civil society actors:** Demand from end consumers is presently low. Although some NGOs take a nuanced stance, current narratives tend to block progress, favouring the exclusion of miners who cannot fulfil stringent due diligence requirements from the outset and penalising attempts of intermediary market actors to transition to more responsible value chain models.
- **Regulatory framework:** Recent and upcoming regulations may initially hamper efforts in the private sector, but are also recognised as a strong driver of change.
- **Challenges in scaling:** The transition to responsibly sourced ASM gold faces hurdles such as high certification costs, logistical challenges in mining regions, and market volatility. Refiners play a key role in shaping the value chain, but scaling up remains difficult.

## Conclusion:

Switzerland, as a key gold hub, holds potential for influencing global ASM gold markets. While a certain part of the Swiss market is gradually moving towards more responsible ASM gold sourcing, sustained efforts from industry stakeholders, policymakers, and civil society are essential to overcome existing barriers and unlock the full potential.

# 1 Motivation & research questions

In regions where gold deposits are found and alternative employment opportunities remain scarce, artisanal and small-scale gold mining (ASGM) often represents a driving economic force and generates much needed income for local people (Fritz and Lara-Rodríguez 2022). At the same time, ASGM is frequently associated with land conflicts, occupational health and safety issues, human rights violations and environmental degradation (Gibb and O’Leary 2014; Mestanza-Ramón, Cuenca-Cumbicus, et al. 2022; Meutia, Bachriadi, and Gafur 2023; Wagner and Hunter 2020; Schilling et al. 2021; Dossou Etui et al. 2024).

These dynamics are reflected in the Madre de Dios region of the Peruvian Amazon, which is the location of one of the intervention areas of the [Wyss Academy for Nature](#). In an inter- and transdisciplinary research project on artisanal mining, research scientists from the Wyss Academy and the [Centre for Development and Environment \(CDE\)](#) at the University of Bern are jointly seeking ways to steer the Madre de Dios’s mining sector in a more responsible direction. The aim is to ensure that miners and communities achieve economic and social benefits, while simultaneously reducing associated environmental harm. The project is based on a pragmatic understanding that mining will likely persist indefinitely in this extended area, given the economic needs of the local community, but its organisation and structure can be improved to protect the forest ecosystems and public health. In the following, the terms “responsible gold” and “clean gold” are used to refer to gold whose mining conditions have been improved in this way.

There are multiple – sometimes interrelated – challenges associated with the transition towards greater sustainability in this sector. These challenges are mutually reinforcing and must be addressed together to achieve impactful outcomes. One core challenge is the limited demand for responsible gold from artisanal and small-scale mining (ASM), in particular the limited willingness and/or ability of buyers to shoulder higher costs – in terms of money and time.

ASM gold from Madre de Dios is sold in local and international markets. Since Swiss companies – including the Swiss gold processing and watchmaking industries – are important buyers of gold, miners from Madre de Dios frequently expressed the desire in project workshops to establish direct and sustainability-oriented value chains linked to this market.

To assess the status quo and to better understand current patterns among buyers in the gold market, we conducted a range of interviews with downstream companies based in Switzerland and with related stakeholders. We also reviewed literature on the Swiss gold market and beyond. Our research was guided by the following questions: *Is the Swiss intermediary market ready to buy gold from responsible ASGM? Are customers willing – or do they have the ability – to bear additional costs in terms of time and money? Do other markets show similar patterns?* In this way, we placed our emphasis on the intermediary market – including refineries and companies selling gold products, such as jewellers, watch makers, and banks – and less on end consumers.

For our assessment, we used the terms “clean” or “responsible” ASM gold, defining it as ASM gold that fulfils the following criteria:

- sourced from formalised mines;
- produced without mercury, or with strict and careful management of mercury and cyanide;
- provides miners with a stable income;
- if sourced from the Amazon, as little deforestation as possible is linked to production, and deforested sites are reforested when extraction ends.

In addition to the guiding questions (see above), the following specific questions structured both the literature review and the interviews:

- *Do companies invest any resources – financially or timewise – to promote the integration of ASM gold in their supply chains?*
- *If yes, what motivates them to do so?*
- *If no, what is preventing them from doing so?*
- *What are enabling/hindering market conditions?*

The interviews were used in particular to generate insights into the challenges that Swiss industry stakeholders are currently facing (see interview guide in appendix 1 for the precise phrasing of corresponding questions). When the interview conditions permitted it, we also asked buyers whether they would consider sourcing clean ASM gold from Madre de Dios (or a comparable region in the Amazon rainforest), by means of the following question:

- *If the criteria for “clean” gold were fulfilled, would you as a Swiss industry stakeholder be willing to source clean ASM gold from Madre de Dios, knowing that ensuring traceability comes with an additional effort in terms of time and/or money?*

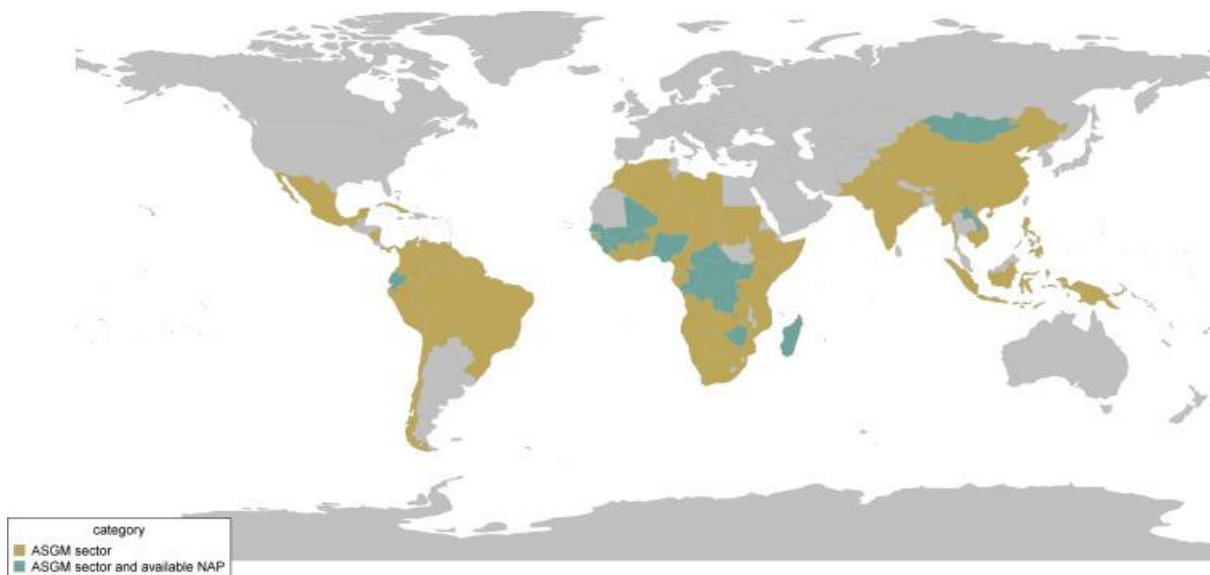
The present working paper combines findings from our literature review and interviews to shed light on buyer market patterns – including the Swiss intermediary market – with regards to sourcing clean gold from artisanal and small-scale mines. In the following, we begin by providing insights into ASGM production in general as well as into the value chain of our particular case study in Madre de Dios; in addition, we introduce some of the schemes governing the downstream gold market in respect of sustainability in gold extraction, with an emphasis on Switzerland (section 2). Next, we summarise insights from the (limited) existing literature concerning Swiss demand for clean ASM gold, complementing them by learnings from literature covering other markets (section 3). Finally, we present the main statements made by Swiss stakeholders during our interviews (section 4), before offering our own conclusions and lessons learnt (section 5).

## 2 Setting the scene

### 2.1 ASGM: Dynamics, scope & impacts

To date, there is no universally accepted definition of ASM nor ASGM. Some define ASGM as “formal or informal mining operations with predominantly simplified forms of exploration, extraction, processing, and transportation” (Proksik, Fischer, and Brugger 2022, p. 11). In reality, ASGM is a collective term for an activity that can take various forms, ranging from individuals using basic tools like sieves to extract gold from mud and water, to small family or village operations, up to and including even larger, industrial-scale operations using machinery where low output makes it economically unattractive for larger corporate or government mining companies (Raab 2024). In contrast, large-scale mining refers to industrial operations that involve substantial investment as well as advanced technology and infrastructure. More specifically, they are usually corporate or government-owned and operate systematically, within formal legal frameworks, and on a much larger scale, often involving heavy machinery like bulldozers, dredges, and mills (Hilson 2002; Proksik, Fischer, and Brugger 2022).

What is certain is that ASGM is widespread across many regions of the world, particularly in rural areas in Africa, Asia, and Latin America. The number of countries where ASGM is present ranges, depending on the source, between at least 64 (Prescott et al. 2022, see Figure 1) and as many as 80 (Raab 2024). Roughly 20% of the world gold production stems from ASGM (Seccatore et al. 2014) and 15-20 million people are engaged in this form of gold mining (Raab 2024; Heymann 2020), representing about 80% of overall gold mining workforce (Raab 2024).



**Figure 1: Countries with documented ASGM sectors (yellow) and available National Action Plan budgets (blue). National Action Plans, which are required from Parties to the Minamata Convention, must include steps toward ASGM formalisation as part of their commitment to the treaty (see Schäli and Bürgi Bonanomi 2025 for context). Source: Prescott et al. 2022.**

As a result, millions of people, predominantly in low- and middle-income countries, depend on ASGM as a livelihood. However, the economic benefits come at a high cost, for those directly involved in mining, for others indirectly affected, and for nature. As documented by the World Health Organisation (2016), health harms associated with ASGM are significant and varied, including chemical, biological, physical, and psychosocial hazards. The most common hazard is mercury exposure, primarily from the use of elemental mercury during amalgamation. Inhalation of mercury vapour can lead to neurological, kidney, and respiratory problems. Long-term exposure can result in tremors, irritability, and death. Miners are also at increased risk for water- and vector-borne diseases like cholera, malaria, and dengue. This is largely due to the lack of adequate water and sanitation infrastructure in many artisanal and small-scale mining camps, which are often located in remote areas. Inadequate sanitation and stagnant water conditions further contribute to the spread of these diseases. Physical injuries due to heavy lifting, repetitive tasks, and poor safety conditions are common (World Health Organisation 2016).

In addition, illegal ASGM is associated with forced labour and child labour, with many workers subject to debt bondage. Human trafficking is also prevalent, with victims, often minors, trafficked into mining camps by family members or criminal networks for labour and sexual exploitation (Verité 2013; Wagner 2021). The ASGM industry is frequently targeted by criminal gangs, armed groups and corrupt officials, and the sector is also exploited to fund war, terrorism, and organised crime (Raab 2024).

Furthermore, the release of mercury into the air, soil, and water degrades ecosystem services, such as clean air, water, and food supplies. Organic mercury accumulates along the food chain and may be ingested in large quantities by humans, which can harm their health and cause symptoms of intoxication (Schutzmeier, Berger, and Bose-O'Reilly 2017; González-Merizalde et al. 2016; Mestanza-Ramón, Mora-Silva, et al. 2022).

Environmental risks of ASGM include deforestation and soil excavation, which pose major threats to biodiversity, water quality, and forest carbon stocks (Asner and Tupayachi 2017). Importantly, the mine-related degradation of ecosystem services can, in turn, exacerbate poverty and social inequality (Vimal et al. 2021; Zambrano-Monserrate, Silva-Zambrano, and Ruano 2018). These and other socio-environmental risks have increased and intensified in recent years. Many resulted in conflicts over natural resource use or contamination, displacement of populations, and the encroachment on areas of special significance to indigenous populations, among other harms (Smith-Roberts et al. 2021; Cuya et al. 2021; Hilson and Laing 2017; Mestanza-Ramón, Mora-Silva, et al. 2022).

## **2.2 Our case study: The ASGM value chain in Madre de Dios**

ASGM is the primary economic driver in Madre de Dios, accounting for roughly half of the department's gross value added (Conservación Amazónica/Proyecto Prevenir de USAID 2022). A total of 93% of the region's surface is covered by Amazonian forest (Reaño 2021), and it is often referred to as the "biodiversity capital" of Peru. To curb negative social and environmental effects of ASGM, including deforestation, the Peruvian state issued an urgency decree in 2010 that determines the area permitted for mining activities in the region, known as the "mining corridor" (Vila Benites and Villanueva Ubillús 2023). In this region, alluvial mining is the preferred extraction method. It involves



suction and dredging devices to recover tiny particles of gold in high concentration from sediments that have been naturally deposited in the region over centuries by water flows from the Andes (ibid).

Peru's law distinguishes between formal, informal, and illegal mining (see appendix 2), which, in reality, often intersect. In 2024, there were 202 formal concession holders in Madre de Dios (Ministerio de Energía y Minas 2024), collectively employing approximately 6,000 persons (Conservación Amazónica/Proyecto Prevenir de USAID 2022). This equals about 13% of the entire mining population (46,601 persons), alongside an estimated 67% informal and 20% illegal miners (ibid.).

Despite an increase in formal mining channels, informal activities are still widespread, particularly in the gold selling, aggregation, and transportation stages, in which miners and aggregators often rely on informal networks (Villanueva Ubillús and Vila Benites 2023). Aggregators are intermediary actors who build trust-based relationships with miners, consolidate the gold, and assume costs associated with transportation and security (ibid.). They play a key role in consolidating small quantities of gold from multiple sources, facilitating the creation of tradeable volumes, and in connecting the dispersed mines with formal (and informal) gold-buying houses in larger cities such as Puerto Maldonado, the capital of Madre de Dios (ibid.). Exact figures on the gold trade volumes via formal versus informal channels for Madre de Dios are lacking. Illicit trade routes are prevalent in the region, but, of course, these are not the trade routes we seek to strengthen and are therefore omitted in the following description.

We focus on three value chain options that show promise from a sustainability perspective and may offer potential for sourcing gold in Madre de Dios in a more responsible way. We have become familiar with these three options through different aspects of our project work. These options exist as described in simplified terms below or similar, though options 2 and 3 operate on a very small scale, as they rely on a minority of formal miners. We do not claim to provide a comprehensive overview of all trade routes, as our knowledge of them is not exhaustive.

Though currently small-scale, these options could be expanded in the future. Each adds value in different ways – regionally, nationally, or internationally – and reflects the ongoing tension between formality, legality, and economic necessity in Peru's ASGM sector (ibid.).

### **Value Chain Option 1: Processed in Madre de Dios and sold on the local market**

In this common scenario, the gold produced by miners, whether formal or informal miners, is transported to local collection and aggregation centres, also operating under either formal or informal arrangements. Formal aggregation centres are authorised by Activos Mineros SAC and located in major cities like Mazuco, Puerto Maldonado, and Huetpetuhe. To sell gold formally, miners must present various documents ensuring the gold's legal origin, including mining permits and waybills. However, many miners, especially those lacking formalisation, end up selling to informal aggregation centres due to logistical and financial constraints.

After aggregation, a large share is transported to neighbouring regions (Puno, Cusco, Arequipa) and Lima for further processing and export (Vila Benites and Villanueva Ubillús 2023). However, a small share (exact figures unknown) is processed and sold in Madre de Dios, for example as small units or jewellery. In this sense, this pathway also comprises a regional value chain in which the added value is captured within Madre de Dios. We believe that the regional value added and associated profits for regional stakeholders are worth supporting.

The majority of the gold from Madre de Dios is sold via this channel, in this way reaching either regional or national/international markets.

### **Value Chain Option 2: Processed into jewellery at the national level and sold on national and international markets**

This value chain involves only formal ASM gold producers in Peru, including some in Madre de Dios, which adhere to additional environmental and social criteria, such as mercury-free extraction. After the gold is collected at a local aggregation point, it is transported by Hermes, a privately-owned provider of secure transportation services that is the sole source of such services in the region. Hermes transports the gold overland, as flying it out of Puerto Maldonado is prohibited.

The gold is then sent to the Peruvian jeweller Arin in Lima ([Arin SA](#)), where it is used to manufacture jewellery, much of which is exported internationally, including a large consumer base in the United States. The added value for this value chain option is captured in Lima, as the gold undergoes further processing before being sold nationally and internationally.

Notably, for gold to be part of this formal chain, it must be traceable and only come from publicly authorised mining operations. This implies that only a small fraction of the gold sourced in Madre de Dios is eligible for this channel; indeed, Arin works with fewer than 20 producers from the region.

### **Value Chain Option 3: Certified and sold on the international market as responsible gold – often advanced processing steps occur outside of the country of origin**

The third path follows the certified gold supply chain, which adheres to international standards for responsible sourcing and relies on internationally recognised certification schemes. Certifiers such as SBGA, Fairmined or Fairtrade (see section 2.3 below), require that mines meet specific environmental and social criteria, which often include either prohibition or controlled use of chemicals. It is important to note that, to date, Fairmined is the only certifying body that has accredited miners in Madre de Dios; neither SBGA nor Fairtrade are currently active in the region.

The gold is sourced from certified miners and first-stage processed at a collection point, where it is transformed into so-called doré bars, an intermediate product that is not yet pure but contains a high concentration of gold. It is then passed on to a company specialising in safe transportation, which handles its international delivery. In the destination countries, further processing takes place in refineries, and the gold is made into bars or prepared for watch and jewellery manufacturing. Banks, as well as watch and jewellery makers, purchase this gold at a higher price than the usual market rate. This premium helps fund the certification system as well as social and environmental projects in the mining communities.

While, ideally, the miners experience a more stable and rewarding pricing arrangement in this value chain, most of the added value linked to gold processing is currently captured in downstream markets outside the country of origin.

Again, as only formal miners qualify as suppliers, the gold volume traded via this channel is in the low, one-digit percentage range. Traceability is a key feature in value chain options 2 and 3, as the gold must be verifiably sourced from formal mines, complying with additional social and environmental criteria. Despite low trading volumes, the present study focuses on option 3.

## 2.3 Governance schemes in downstream markets to foster sourcing of clean gold

For some years, both gold producer and consumer countries have been exploring methods to regulate gold value chains to ensure more sustainable, equitable production practices. For more information on public regulation at various levels of governance and related incentive schemes – such as those provided by the UNEP/Minamata process – readers are referred to Schäli and Bürgi Bonanomi (2025). In the following, we describe and provide examples of three of the most relevant concepts at the international level, namely private sector initiatives, multistakeholder initiatives, and public-private partnerships. For additional details, please consult appendix 3.

The private sector has reacted to increasing pressure and demand for responsible gold by developing its own self-regulatory instruments. While companies are generally free to decide whether they want to join private governance schemes, they are bound by the respective rules once they have opted in.

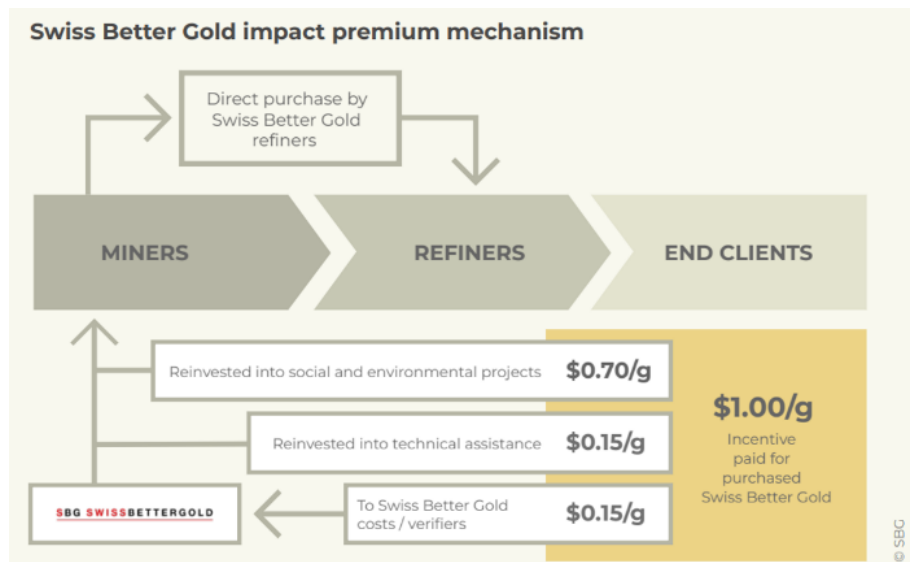
The London Bullion Market Association (LBMA), the Responsible Jewellery Council (RJC), and the World Gold Council (WGC) are three key industry organisations that implement standards and guidelines aimed at ensuring ethical practices in the gold sector (Pieth 2019). The LBMA promotes ethical supply chains through its Good Delivery Lists and Responsible Gold Guidance, which largely replicates the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance); nevertheless, these have been criticised for insufficient due diligence requirements along the value chain (OECD 2018). The RJC, with a focus on improving conditions in the jewellery industry, offers the Code of Practices and the Chain of Custody standards; however, it faces scrutiny over its reliance on self-reporting and the voluntary nature of its more rigorous standard, the Chain of Custody (OECD 2018; Herzog et al. 2015; Becker 2018). Lastly, the WGC, which represents large-scale mining companies, has introduced the Conflict-free Gold Standard to align with OECD Guidance; it too has been criticised for its self-evaluation policy and limited transparency (Pieth 2019).

In addition to these business-led initiatives, there are multistakeholder efforts aimed at supporting sustainable ASGM practices. The two organisations mentioned here are primarily recognised as certification bodies, but their work extends beyond certification. For example, Fairmined certifies mining cooperatives and promotes ecological practices. Similarly, Fairtrade Gold focuses on improving working conditions and promoting formalisation of ASGM. Both programmes seek to enhance market access and to ensure ethical practices.

The Swiss Better Gold Association (SBGA) is a non-profit association initiated by Swiss businesses in the gold sector. It supports the development of responsible ASM gold supply chains. The SBGA is (still) in a public-private partnership with the Swiss State Secretariat for Economic Affairs SECO. Together, they manage the Swiss Better Gold Initiative (SBGI), which works with miners in Peru and Colombia to improve social and environmental conditions.

The initiative provides an accreditation system that facilitates miners' access to the Swiss market. The SBGA is an influential certifier, uniting multiple prominent stakeholders in the Swiss gold sector, and the largest on the Swiss Market in terms of sourcing volume.

Stakeholder discussions in Switzerland typically feature a somewhat consistent group of actors at the consumer end of the value chain, such as the SBGA and some of its (selling) members, as well as NGOs and international bodies such as SWISSAID, the Society for Threatened Peoples, WGC, and LBMA, among others. From a large-scale perspective, "multistakeholder partnerships will be critical for unlocking, leveraging, and coordinating a variety of support sources" and "to really make a sustainable impact on the [ASM] sector's development" (p. 35, World Bank 2024).



**Figure 2: Swiss Better Gold impact premium mechanism. Source: Swiss Better Gold Association 2024.**

## 3 Literature review

The following section presents relevant insights from the literature concerning Swiss demand for clean ASM gold, complemented by selected learnings from literature covering other downstream markets across the globe. It also includes observations on the effectiveness of certain governance schemes introduced in the previous section. Both scientific and grey literature were reviewed.

There are several reports and studies highlighting the insufficient transparency of (ASM) gold value chains. There is also a large body of academic and non-academic literature on ASGM impacts. Further, the trend towards more responsible gold extraction practices and respective regulatory adjustments and due diligence requirements are relatively well documented. However, from the literature available, it is difficult to obtain an accurate understanding of demand for ASM gold, specifically, whether at the end consumer level or the intermediary buyer level. Studies investigating this topic are mainly small-scale and qualitative, making it difficult to quantify this demand.

### 3.1 Swiss market

#### Public discourse

The public discourse on gold value chains and sustainability in Switzerland is strongly dominated by the media and NGOs. Media reports include critical assessments of efforts to promote the ASM sector (e.g. Schnurrenberger 2021; Pelosi 2022; Humbel 2023). Swiss and international NGOs consistently demand more transparency in the Swiss gold trade (Ummel 2020; Mercier 2023; García et al. 2023; Gesellschaft für bedrohte Völker Schweiz 2022). In 2015, the Swiss NGO Public Eye investigated the true origin of ASM gold allegedly imported into Switzerland from Togo, a non-producing country. The report argues that the gold actually stems from Burkina Faso, where it was extracted under conditions that violate human and children's rights (Marc Guéniat and Natasha White 2015). This report triggered a parliamentary postulate, which eventually prompted the Swiss government to publish a gold report (Federal Council 2018).

Another notable political occurrence aimed at greater transparency in the Swiss gold industry was the Responsible Business Initiative. It was a popular initiative that sought to enhance sustainable corporate governance in general. Though the Swiss electorate narrowly voted in favour of the initiative in 2020, it failed to achieve a majority in the cantonal vote and was thus rejected. Nevertheless, it led the Swiss Federal Council to enact new regulations (Schäli, Burger, and Bürgi Bonanomi 2025). In 2024, the Coalition for Responsible Business drafted a letter of protest to CEOs of Swiss refineries, arguing that Swiss refineries “should no longer be allowed to profit from human rights violations and environmental destruction” (Koalition für Konzernverantwortung 2024).

Furthermore, a 2023 Federal Supreme Court ruling confirmed that the Federal Office of Customs and Border Security cannot publicly disclose information on gold suppliers of Swiss companies because of business and tax secrecy (Schäli, Burger, and Bürgi Bonanomi 2025).

Taken together, these developments point to increasing demand for supply chain transparency. While traceability is an important element of transparency, the two terms should not be used interchangeably. Transparency is broader and encompasses more than traceability. Traceability in this context means demonstrating that all the gold obtained by a given company stems from certified sources that comply with social and environmental standards; in this way, traceability is essential to responsible gold. Traceability tools are often discussed in stakeholder debates. However, there are also critical perspectives, highlighting the lack of fool-proof traceability methods. Brugger (2019), for instance, argues that blockchain technology does not allow to effectively trace the origin of materials to the mine level and instead relies on the personal trustworthiness of supply chain partners, implying this makes it vulnerable to risks such as corruption and gold laundering.

### **Demand for clean ASM gold**

In 2013, students at the University of St. Gallen investigated the market potential of Fairtrade gold in Switzerland (Kuhn, Kohler, and Caplazi 2013). They conducted interviews with eight individuals who were actively involved in or closely monitoring Fairtrade gold at the time. From these interviews, they concluded that Fairtrade gold is a niche product whose potential market is challenging to estimate. Further, it is unsuitable for banks based on their need for large volume tradability and long-term investment opportunities. This limits Fairtrade's ability to reduce "dirty" gold and ensure local economic benefits, leading the authors to call for more comprehensive industry-wide initiatives.

More recently, Van der Merwe (2022) investigated the complexities of demand for certified gold, focusing on the fragmentation of certification schemes and the diverging motivations of industry stakeholders. For this study, four expert interviews were conducted (international retailer, goldsmith, banking and trading, and certification). Questions focused on the impact of the Covid pandemic on certified gold supply, interests and perceptions among end consumers, options for sourcing responsibly, and how market fragmentation affects these options. Additional questions explored the divergence in operations and requirements across different industry stakeholders.

Van der Merwe (2022) concluded that demand for certified ASM gold is increasing, driven by industry stakeholders such as jewellers and banks. However, according to the author, these two retailers confront distinct challenges, with jewellers more likely to face the demand for responsible gold from clients, and less burden from costs given that their products often only contain small components of certified gold. Investors in gold bars, by contrast, were found to face considerable financial burdens, as the cost of certification is directly transferred to the price of the gold bar. Moreover, banks rely on a certain minimum volume of gold supply, which is still difficult to cover with the available quantities. Thus, according to the author, banks should diversify their sources.

In a policy brief (Van der Merwe 2021) related to the same study, the author recommends the following to promote certified gold in the jewellery sector:

- informing end consumers on issues in the gold industry and benefits of certified gold;
- increasing certified semi-finished products to help medium-size retailers source responsibly;
- consolidating various schemes and rebranding sustainability labels to fit luxury products.

- Additionally, according to the author, banks should:
- consider a mix of sources of sustainable gold;
- increase transparency on the provenance of gold to industrial mine-level;
- use book-and-claim schemes to offset the impact of existing gold stock; and
- promote lesser-known certification labels to investors.

The author concludes that the rise of various competing certification schemes, coupled with insufficient consumer demand, hinders these schemes from expanding beyond their niche markets.

Van der Merwe's study is part of a broader body of research produced by the Swiss Minerals Observatory. Hosted at the Institute of Science, Technology, and Policy at ETH Zürich, the Swiss Minerals Observatory is an association of researchers from various disciplines with the aim to advance sustainable and responsible mineral extraction and trade. The researchers summarised their insights in a recent synthesis report (Brugger et al. 2022).

In the report, among other issues, the topic of supply chain regulation was investigated (for evolving public regulations, refer to Schäli, Burger, and Bürgi Bonanomi (2025)). The research suggests that stringent regulations for global supply chains might be supported by a considerable share of the population in high-income countries (Rudolph, Kolcava, and Bernauer 2019; Kolcava, Smith, and Bernauer 2022), though the political viability and enforceability of sustainability regulations ultimately depend on the design of the governance framework as well as the level of cooperation between governments and the private sector. The authors argue that regulatory approaches, building on voluntary initiatives from the private sector, can give implementing firms a competitive advantage (Fooks et al. 2013). The Swiss Minerals Observatory identifies the following avenues for research:

- effectiveness of evolving public policy based on corporate disclosure;
- translation of value chain transparency into sustainability;
- demand for more responsibly sourced metals, including:
  - consumer preferences
  - communication between retailers and consumers.

In summary, according to the limited available literature we identified and selected, the demand for responsibly produced ASM gold is growing in Switzerland, albeit slowly. This growth is mainly based on demand from the individual industry players, each placing unique requirements on the supply. Swiss end consumer demand has not been studied in detail and/or the results of such studies are not (yet) publicly available.

### **Amazon ASM gold in Switzerland**

The scarce available literature suggests that ASM gold from the Amazon region has travelled to Switzerland in the past as well as more recently (e.g. Biber 2022; additional examples below).

Particularly interesting is the case of gold imports from the Bajo Cauca region in Colombia, although, strictly speaking, it is not part of the Amazon region. Nevertheless, Bajo Cauca is comparable to Madre de Dios in several key aspects, including: the occurrence of informal and illegal alluvial mining in a tropical forest ecosystem near/in indigenous territories; efforts at

formalisation; mercury pollution; organised crime and violence; social and human rights issues; high economic importance; and lack of effective governance. ASM gold is currently imported into Switzerland from the SBG-certified Río Rayo mines in Bajo Cauca, which serve as a model for responsible mining and circular economy in the region (Gobernación de Antioquia 2023).

The imports from Activos Mineros S.A. from the same region should not go unmentioned here, though this is a medium-scale mining company. The NGO Fastenaktion has reported on various conflicts and issues connected to the company's mining activities, ranging from lack of consultation and inadequate compensation to threatened food security for fisherpersons as well as a large number of illegal miners suffering "catastrophic" social and ecological consequences (Mercier 2023). Fastenaktion explicitly does not call for Swiss refineries to disengage from the risk area, but rather to transparently and publicly report on the origin of the gold, in line with the OECD Guidance.

Similarly, the NGO Society for Threatened Peoples (2014) has criticised the lack of transparency of Swiss refineries regarding their business in Peru. They claim that Swiss refineries have imported "metal" from "several questionable companies [...] in the Madre de Dios area" (Gesellschaft für bedrohte Völker Schweiz 2014, p. 5). In 2018, the NGO released a report suggesting that gold from Madre de Dios was still being exported to Switzerland (Gesellschaft für bedrohte Völker Schweiz 2018).

For similar reasons, the same NGO has criticised ASM gold imports to Switzerland from two Brazilian Amazon cities, where gold from illegal ASM mining activities is frequently mixed with legally sourced ASM gold (Gesellschaft für bedrohte Völker Schweiz 2022). In response, in 2022, several major Swiss refineries pledged to stop importing gold from regions where illegal mining is prevalent, making a particular commitment to avoid gold from indigenous territories of the Brazilian Amazon (Soguel 2022; Swiss Association of Precious Metals Manufacturers and Traders 2022). While the NGO recognises that affected miners and others lack alternative livelihoods (Gesellschaft für bedrohte Völker Schweiz 2014), it does not discuss the wider implications of refineries' abandoning these miners.

In this way, while efforts are being made to regulate and improve the transparency of gold imports into Switzerland, significant challenges remain in ensuring that these measures effectively mitigate the complex social and environmental impacts of ASM gold mining in the Amazon and similar regions.

## 3.2 International markets

Building on the understanding of Switzerland's role in the global gold trade, it is important to recognise how this market fits into the international landscape. This subsection expands our focus to examine additional gold importing countries and the complexities they face in sourcing ASM gold. We assessed literature investigating other market demands, regulatory challenges, and shifts towards more responsible sourcing practices in countries such as the USA, India, the United Arab Emirates (UAE), and Germany – and the extent to which such literature is available. Through this broader lens, we deduced conclusions regarding the interplay between national regulations and global market forces in the context of responsible ASGM production.



## Global gold imports and responsible sourcing trends

As of 2022, Switzerland accounted for over 20% of global gold imports, with other major importing countries including China, the UAE, the UK, Hong Kong, and India (Soguel and Turuban 2024a). The main importing countries, however, vary slightly depending on the source of the gold. For instance, gold exported from African countries is mainly shipped to Switzerland, the UAE, and India, which together imported 80% of all African gold not traded within the continent in 2022. Intra-African trade, led by South Africa as the largest buyer, constitutes the remaining 20% (Ummel and Schulz 2024). Similarly, Switzerland, India and the UAE are among the top destinations for Peruvian gold, along with Canada and the USA (Berríos, Amancio, and Huamán 2024).

Despite growing interest in responsible sourcing, actors in the global gold industry have been cautious about getting involved with ASM gold due to reputational risks and challenges along the supply chain (Solidaridad, n.d.), as mentioned above. At the same time, internationally, refiners display increasing interest in ASM gold, as they are pressured by civil society and the OECD to find ways of engaging responsibly with ASM miners (ibid).

Similarly, though traditionally conservative, the watchmaking and jewellery sector, traditionally conservative, is slowly adapting to increasing demand for sustainability. Although corresponding brands are generally not directly involved in the extraction of precious metals, they have substantial influence and can serve as role models in promoting responsible value chains. End consumers increasingly demand more transparency regarding ethical and environmental sustainability in watches and jewellery, though not yet to the same extent as in other sectors of consumer goods (Verquère and Loetscher 2024).

To identify whether market demands are similar globally, we reviewed various regional developments focusing on a selection of major gold importers outside of Switzerland. As mentioned above, ensuring the traceability of gold can be highly challenging; and in Switzerland, the last place of processing of gold is considered the place of origin (Ummel and Schulz 2024). As a result, reviewing and understanding other key countries' regulations is relevant to our analysis of the Swiss gold market.

### ASM gold in the North American market

A 2021 USAID study (Jacot et al. 2021) of the North American gold jewellery market, focusing on ASM gold from the DRC, found that many jewellers are increasingly aware of the market's impact on mining communities. As a result, they are showing growing interest in sourcing responsible ASM gold. For some companies, the Black Lives Matter movement heightened awareness of their businesses' social impact on these communities. Nevertheless, despite this growing interest, jewellers face significant barriers to sourcing responsible ASM gold including commercial, logistical, and regulatory challenges, as well as inconsistent consumer demand. At the time of the USAID study, 58% of the interviewed jewellers (including designer-makers, SMEs, High Street, luxury, manufacturers, and platforms) were sourcing ASM gold. However, many constraints persisted, including higher costs. Larger brands struggle with the small volumes and inconsistent quality of the material, while smaller businesses have difficulties sourcing the right material, such as specific colours.

Further barriers for small businesses include confusing due diligence and reporting requirements in supply chains and difficulties finding casters willing to work with ASM gold while keeping it

segregated from other gold types. At the same time, manufacturers often do not have the capability to conduct on site due diligence of mines, and finding trustworthy exporters is equally challenging. This difficulty of reliable traceability is also reflected in gold sourced from Peru, as highlighted in a report by Ojo Público (Berríos, Amancio, and Huamán 2024).

The USAID study (Jacot et al. 2021) also indicated that the popularity of recycled gold is another key obstacle to promotion of ASM gold in the US. Jewellers often opt for recycled gold over artisanal gold due to its easier marketing as a responsible choice, lower costs, and more reliable supply. Consumers often perceive recycled gold as more environmentally sustainable, making it difficult for jewellers to justify the premium associated with artisanal gold. Additionally, three-quarters of the jewellers surveyed expressed concerns about the use of mercury in mining, hoping for either alternative technologies or stricter regulations. Social topics such as conflicts were further mentioned. Jewellers want transparency regarding the use of the premium paid for ASM gold, with many wishing to see a portion of it going to the mining community for a positive impact.

A previous study by the consultancy Levin Sources (2019) confirms that jewellers are the main clients buying responsible gold from refiners, as they are often confronted by NGOs and/or are generally interested in the ethical aspects of their material. In contrast, interviews with refiners across Europe, Middle East, Asia, and South Africa indicate that clients from other sectors, such as ICT industries or banks, often do not ask about the origin of the gold. Refiners mention a variety of barriers they face when sourcing responsible ASM gold, ranging from payment methods to the reputational risks of sourcing countries, the limited number of certified mines, and difficulties when working with exporters unwilling to provide due diligence. High logistics and security costs also represent significant concerns. Similar to the concerns of jewellers, refiners too struggle with the fluctuating volumes associated with ASM gold supplies.

### **Emerging gold markets – India and the UAE**

Switzerland, Canada, and the US have dominated the Peruvian gold market. To ensure responsible sourcing of ASM gold, these markets have been pushing towards corresponding reforms. However, competition from “emerging gold markets” – especially India – is intensifying. Studies by Villanueva Ubillús and Vila Benites (2023) and Ojo Público (Berríos, Amancio, and Huamán 2024) suggest that ASM gold mostly enters India through informal channels and smuggling, with less emphasis on responsible sourcing. Nonetheless, Indian initiatives such as “#SayNoToBadGold” and “Right2RightGold” are promoting ethical gold practices, though it is unclear whether they specifically address ASM gold or gold in general (see e.g. The Golden Truth 2023; The Times of India 2023). Nevertheless, as discovered by SWISSAID, the share of ASM gold traded from African countries to India only amounted to 0.01 tonnes (out of 57) in 2021 (Ummel and Schulz 2024). Additionally, India does not have any regulations that comport with the OECD Guidance.

The UAE is another major destination for gold with suspicious origins, including Peruvian gold, according to Ojo Público (2024). The SWISSAID study (Ummel and Schulz 2024) found discrepancies in trade data between African countries. In the study, they calculated that 80-85% of African ASM gold is imported by the UAE. Experts in the field even state that Dubai might already be a bigger player than Switzerland when it comes to ASM gold. The UAE is investing in gold sourced from small-scale mines from countries in Africa, Latin America, and Asia, while Switzerland focuses on material from industrial mines (Soguel and Turuban 2024a). According to the Ministry of Economy of the UAE they have made efforts to improve ASM producers’ incomes since recognising their crucial role in the

global gold system (ibid). Indeed, the UAE came up with the Good Delivery Standard (UAEGD) in 2021 which entails rules for the gold trade just like the LBMA (Soguel and Turuban 2024a). The UAEGD, compared to previous standards in place, is no longer only valid for Dubai – the “City of Gold” – but covers all of the UAE and aligns with existing international standards and best practices (Küçükemiroğlu 2022). The first shipment of gold aligned with these standards was exported to India at the end of 2022 (Ministry of Economy UAE 2022).

While compliance with the UAEGD remains voluntary, responsible sourcing became mandatory under the Due Diligence Regulations for Responsible Sourcing of Gold which went into effect at the beginning of 2023. It requires annual audits of actors in the gold sector; the UAE clearly wants to highlight its efforts in the fight against money laundering (Küçükemiroğlu 2022). While this remarkable development in the direction of more transparency in this major gold market is welcomed, the international gold industry remains watchful about how the new regulations will influence the wider market. The UAE also exports gold to Switzerland (Whitehouse 2022) and, according to the SWISSAID study, conflict-related and smuggled African ASM gold may be imported by Switzerland as legal Emirati gold (Soguel and Turuban 2024b; SWISSAID 2024).

Little information is available on market demand for certified ASM gold in India and the UAE. This is reflected in the map of Fairmined actors, for example, which indicates only four actors in India and one in the UAE, compared to 128 in North America and 225 in Western Europe (authorised suppliers and licensed brands; Fairmined 2024a).

## **Lessons from Germany**

Of course, countries other than Switzerland, India, the USA, and the UAE also import gold from Peru, Africa, and/or other countries and continents. The traded quantities are, however, much smaller (Ummel and Schulz 2024). An extensive market study is available for the German gold sector (Levin Sources 2019; Gronwald 2019), for example. It found that mainly smaller goldsmiths in Germany are interested in ASM gold, whereas the demand from large jewellery and investment firms remains limited. Similar to the findings on the US gold market, insufficient supply of material makes it uninteresting for German refiners to process this type of gold and they can cover their needs with recycled gold. However, Fairtrade and Fairmined goldsmiths reported growing interest in ASM gold from German buyers, especially for wedding bands and engagement rings. In the industrial and investment sectors, ASM gold remains niche and Fairtrade bars are predominantly refined by Swiss and British firms. The motivation to source ASM materials stems mainly from the personal ethical values of goldsmiths themselves rather than direct end consumer demand. The fact that Fairmined only provides its documents in English presents another obstacle for the often rather locally oriented German market actors. The study also identified growth potential in the German ASM market. Recommendations included, for instance, raising awareness across the entire supply chain, from consumers to downstream industry players. This could be done via pilot projects. Collaboration among actors from the public sector, refiners, and organisations like Fairtrade could be beneficial when addressing supply challenges, while targeted training and translated materials can further support companies in transitioning to clean ASM sourcing (ibid).

## Effectiveness of certification schemes

As to available literature on the effectiveness of certification schemes, it indicates that a variety of challenges hinder the effectiveness of ASGM certification schemes from the perspective of industrial buyers. Key issues include reliable traceability, limited supply volumes, and pricing structures that require an additional premium (Zürcher Kantonalbank 2021). Until these challenges are addressed, scaling up the adoption of clean ASM gold is expected to remain difficult, according to industry actors.

Despite seeing signs of progress, the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development also views the situation critically. It voices doubts about “clean ASM gold” schemes reaching the most marginalised communities who most need support, stating that initiatives more likely benefit already licensed cooperatives with the resources to meet certification requirements and associated costs. The Intergovernmental Forum also raises concerns about the durability of the initiatives, as they depend on Western markets and ethical consumption trends (Fritz et al. 2018).

In scientific literature, Oakley (2022) also makes critical observations of certification schemes, emphasising a lack of sufficient support for the majority of miners wanting to make the journey towards certification.

The same author raises the question of whether certification schemes should actively foster rather than merely oversee a responsible supply chain created by them, pointing out that non-intervention can prove disastrous. He sees the main positive contribution of such schemes in their ability to challenge established practices by sparking debate and dissent. While this benefit undoubtedly exists, the diversity of programmes also highlights the complexity and fragmentation that characterise the certification sector (Van der Merwe 2021).

While the literature on demand for clean ASM gold is sparse, it points to similar patterns in the Swiss and other global markets and allows us to draw some interim conclusions. According to some studies, artisanal jewellers are more inclined than large retailers and banks to promote and invest in the ASGM value chain. The literature moreover indicates that, while end consumer demand is low, general awareness of the need for responsible extraction practices is rising. Thus, there is a gradual shift towards more sustainability and transparency, mostly driven by intermediary buyers of gold. However, the complexity of the ASM gold trade involving formal, informal, and illegal production – and of corresponding regulations – restricts these actors’ enthusiasm to engage. Further, buyers typically lack the capacity to conduct on-site auditing of mining operations, making them dependent on third-parties such as certifiers. Overall, the costs of transitioning towards more responsible ASGM practices are high. Consequently, although there is a trend towards more sustainability and transparency, the transition is complex and fraught with challenges.

# 4 Interviews with key stakeholders in the Swiss gold market

## 4.1 Methodology

Building on our review of existing literature, we now turn to our empirical research and analyse the interviews we conducted with key players in the Swiss gold market. To address the research questions laid out in the introduction – namely, the readiness of Swiss intermediary buyers to purchase responsibly sourced ASM gold as well as their willingness or capacity to accommodate associated costs – we employed targeted interview methodologies. By engaging with refineries, watchmakers, jewellers, and banks, we sought practical insights into the previous, current, and/or envisioned practices of these stakeholders and the challenges they face in adopting clean ASM gold, thereby complementing our theoretical findings.

Initially, we aimed to engage a diverse group of industry stakeholders, ensuring representation across business sizes and segments within the gold market. Our intention was to include both businesses involved in ASGM and those not involved, thus achieving a balanced representation of Swiss market actors. However, during our outreach, it became evident that those actively engaged in ASGM were more willing to participate, while many who were not involved declined our interview requests.

Consequently, we adopted a purposive sampling strategy, which entails selecting participants based on their specific knowledge and experience relevant to the research topic. This approach is commonly used in qualitative research to gather in-depth insights from targeted groups (Patton 2014; Robinson 2014). This led us to focus on stakeholders who, through their work on the subject, were partly interlinked. Our final sample consisted of six industry stakeholders, representing jewellers and watchmakers (3), banks (2), and a refinery (1), supplemented by representatives from the Swiss Central Office for Precious Metals Control and the Swiss Better Gold Association (SBGA) for additional contextualisation. Semi-structured interviews were held with the eight participants between May and August 2024, virtually or in person.

We adopted a thematic approach as described by Miles and Huberman (1994) to present, examine, and interpret the data collected during the interviews. It involves identifying, analysing, and reporting patterns (themes) within qualitative data. This method organises data into key themes that capture important aspects of the research questions, providing a coherent narrative that reflects participants' perspectives while maintaining the complexity of the data. It emphasises the relationships between themes and how they contribute to the overall interpretation of the data. Some of the identified themes were suggested through the research and corresponding interview questions, others surfaced during the initial interviews and often the same themes were revisited in the subsequent interviews. To systematise this, we developed some codes inductively during the analysis process. Codes are short labels or tags used to categorise and summarise segments of data, making it possible to identify and organise patterns more effectively. This approach of emergent coding enables themes to emerge naturally from the data and facilitates a more holistic understanding of the underlying patterns (Charmaz 2006).

## 4.2 Results

The data is organised around the identified themes, highlighting both agreements and disagreements among the interview participants.

### Investments in the ASGM value chain

The different approaches that exist today to integrate responsible ASM gold into current business models imply major changes in supply chain configurations (e.g. in infrastructure for separate production lines, auditing, documentation, traceability, supplier relationship development, and management). The respondents rated the necessary additional efforts as follows: Firstly, the increased direct financial investments are considerable. Most of the companies interviewed do not pass on the extra costs related to certification to end consumers, and their margins are therefore small; in this way, certified gold is not a profitable business at present. Thus, the costs of exploring and testing an alternative ASGM value chain model is largely borne by refineries, brands, and financial institutes. In the long run, however, this value chain needs to be profitable in order to persist, as emphasised by one respondent. While costs related to due diligence are distributed among different actors along the value chain, much of the burden remains with the refiners.

At least equally important as the financial outlay is the investment of time in the form of working hours, estimated by some respondents at between 2–4 full-time positions per company. They include the work hours of sustainability and compliance experts and their teams, and often additional specialised teams and departments. For instance, two respondents highlighted the significant investment of a CEO visiting ASGM operations during a multi-week business trip, based on first-hand experience. Finally, interviewees mentioned the time investment of acquiring and expanding expert knowledge and skills to build in-house competence for the assessment of ASM projects, their impact, and monitoring strategies.

### Motivation

Respondents named a number of factors as motivators. Increasing public interest in the provenance of gold is certainly one of them. Some industry representatives cited feeling the direct pressure through increased enquiries by business partners and the media. General demand for gold also plays a part: ASGM accounts for 20% of the annual gold production worldwide, and given the growing global demand, this is a share that cannot be ignored. Buyers also have an interest in diversifying their gold supply as a risk mitigation strategy.

However, the aspect emphasised most by our interviewees was intrinsic motivation. Some view their engagement as an opportunity to make the company's more values visible, others cited a sense of responsibility to give something back to a value chain that enables them to run a lucrative business.

A variety of motivators – including the Covid-19 pandemic – were further named. According to an interviewee representing a luxury goods brand, the increase in ASGM and corresponding negative impacts increased the pressure to act. By contrast, a bank representative indicated they were motivated to focus more on gold due to the massive rise in the gold price, based in part, on geopolitical events such as the pandemic and the war in the Ukraine. Finally, the development of closer relationships between suppliers and final sellers – enabling deeper understanding of the conditions for ASGM operators – is valued as a strong motivator.

## **The role of end consumers**

End consumer demand is not a major motivator for industry players to engage in ASGM, as it is currently very low. There is a broad consensus that end customers remain largely unaware of ASM and related issues and opportunities, and/or other considerations are prioritised when they purchase gold. Some respondents voiced a desire and sense of responsibility to change that, to enable their clients to understand what is behind gold products, and to raise awareness overall.

The strategies suggested, however, differ considerably. Several participants referred to the film “Black Diamond” (2006), which depicts the brutal conflict in Sierra Leone fuelled by the illicit diamond trade. The film helped raise awareness about ethical sourcing, ultimately prompting reforms in the jewellery sector to enhance environmental, social, and governance practices. Some speculated that a similar narrative about ASM gold could trigger a shift in consumer awareness and behaviour, which could boost their efforts related to responsible ASM gold. Others, however, noted that the effects of “Blood Diamond” on end consumer behaviour were short-lived, and that regulations in general were and are a more powerful change agent.

Further, interviewees underlined that it is a balancing act to make grievances visible without alienating customers, particularly in the luxury goods sector, in which clients expect perfect products in exchange for paying high prices and in which the general marketing strategy is to sell dreams. End consumers are more receptive to success stories and positive impacts, and from this perspective, engagement in ASGM offers opportunities for businesses. Yet some are reluctant to market ASGM gold as responsible, out of concern it might raise questions regarding the provenance of the rest of their gold supply.

The bank representatives both stated that their involvement in the field is not (or only to a small degree) in response to their customers' needs; rather, they perceive it as their duty to bring the topic of responsible ASGM closer to their clients.

## **Public regulations**

Industry stakeholders displayed mixed views about regulations related to the ASGM value chain. Some anticipated that recent and upcoming regulations – such as the Swiss Anti-Money Laundering Act, the EU Corporate Sustainability Due Diligence Directive, and the EU Regulation on Deforestation-free Products – could complicate their efforts and add challenges. A possible temporary rise in costs was also mentioned, based on additional demand for a limited resource. Overall, respondents did not expect major adjustments to their existing business procedures due to upcoming regulations.

At the same time, regulations were acknowledged as a strong driver of change. The refinery representative, in particular, voiced appreciation for Switzerland's stringent regulatory framework and expressed support for enhancing the Precious Metals Control's competencies to control refineries more strictly and properly sanction malpractice. Under the current regulations, the Precious Metals Control Authority's main responsibilities are to confirm the authenticity of precious metals and that their extraction and trade are not associated with illegal financial flows. They do not have a supervisory function regarding further due diligence obligations and do not expect to be granted such a role in the near future.

## Recycled gold

The topic of recycled gold came up repeatedly. RJC-certified (Chain of Custody) recycled gold is a widespread supply choice for businesses, as it is often cost-effective. Additionally, it offers one viable option to meet the demand for responsible sourcing practices, in the sense that it counts as more sustainable from the environmental perspective (reduced deforestation, use of chemicals, and CO<sub>2</sub> emissions) than newly mined gold, and officially adheres to Environmental, Social, and Governance standards. Moreover, consumers are familiar with the concept of recycling, which makes it easier for marketing teams to communicate and promote than the complex ASGM situation.

Though an ISO standardisation process (ISO/DIS 21261-3) is underway, until this point a clear and universally applicable definition of “recycled” gold has been missing. This absence of a definition, as well as the fact that trade data does not allow to determine what gold is being re-exported, present significant challenges. Just a few processing or refining steps can render gold eligible for recycled status, potentially allowing gold from dubious or illegal sources to enter the legitimate trade. Thus, there is a risk of green and/or social washing associated with recycled gold.

One respondent expressed regret about the way recycled gold is promoted by (unspecified) “big players”, lacking nuance and failing to harmonise the process with key guidelines, suggesting that this complicates the endeavour of establishing a responsible ASGM value chain. Another interviewee said commitments to responsible ASGM and recycling gold are two storylines that are not mutually exclusive and can exist side by side within the same company. This view was supported by another participant, who stated that gold has been and always will be recycled, and that it needs to be this way. The need for a separate secondary circuit within refineries specifically for certified ASM gold was highlighted. For every 10 kg of gold purchased by a watchmaker, for instance, only 1–2 kg are incorporated in watchcases, with the remainder becoming recyclable waste material. If the watchmaker could return certified ASM gold residue to the refinery and obtain the resulting refined material without incurring the premium again, it would decrease the cost considerably and encourage the development of clean ASM gold value chains.

## Sourcing in Madre de Dios

Most Swiss gold buyers do not deem sourcing ASM gold in Madre de Dios feasible for the time being or in the near future. There is a fairly broad consensus on this, though expressed with varying degrees of clarity. Respondents cited a number of factors. One major concern is the scope of negative impacts, with deforestation among the most frequently mentioned. “There is no way deforestation in the Amazon can be declared as responsible”, stated one participant, adding that reforestation initiatives “seem to be only a drop in the ocean.” Other constraints are the lack of both a clear governance structure and safe transportation possibilities.

One of the two bank representatives stated that engagement would only be viable if clear governance structures were in place, certain conditions (such as safe working conditions, compliance with environmental standards) were met, and fundamental risks (such as improper use of mercury and illicit financial flows, given the strengthened anti-money laundering schemes in buyer countries) could be excluded. Thus, this respondent did not see a sourcing possibility for their brand in Madre de Dios to support miners that are in transition.

Concern about reputational damage was evident among all industry stakeholders. The amount of media coverage of the negative environmental and social impacts of mining in the region has been



immense. So immense, according to one interviewee, that “even if the ideal mine existed, there would be massive difficulties in selling this gold to the European market”. The picture might look different if the Swiss Better Gold Initiative was active in Madre de Dios; we learnt in the interviews that this initiative successfully helped to build trust in ASM sourcing among buyers.

Some of the interviewees acknowledged that engaging in ASGM in Peru while disregarding Madre de Dios would lack credibility. Therefore, they said they would consider taking up corporate social responsibility initiatives in the region. These respondents displayed awareness that in regions harbouring the greatest risks, the potential positive impact is often greatest. Two of them emphasised that whether a region is considered for procurement is not so much a matter of risk, but rather of available risk mitigation strategies. According to them, no region should necessarily be excluded a priori, regardless of the potential risks. Some interviewees appeared to have been monitoring the developments in Madre de Dios closely in recent years, but did not see a feasible opportunity for engagement. The bank participants also showed cautious interest in the idea of tapping innovative ways of climate or sustainable funding for gold that has not been extracted, but were not familiar with the concept and associated many uncertainties with it.

### **Hindering & enabling factors**

The interviews revealed the actors’ views on both a variety of challenges and (potential) enabling factors concerning the development and maintenance of ASGM sourcing and related value chain models. In some cases, the categorisation was ambiguous, as certain factors could be both hindering and enabling. The list below is an attempt to describe and categorise these elements.

Hindering factors:

- **Current legislation:** new legal provisions connected to the Anti-Money Laundering Act foster formalisation processes and may marginalise small miners that work in an informal setting (see Schäli, Burger, and Bürgi Bonanomi 2025).
- **New due diligence requirements:** these make the sourcing from Amazon regions more difficult since deforestation is involved (see Schäli, Burger, and Bürgi Bonanomi 2025).
- **Tainted public perception, lack of tolerance and nuance in civil society:** new and positive narratives would support industry efforts, as well as legalising and destigmatising ASGM.
- **Small demand from end consumers and industry stakeholders.**
- **In the banking sector, the willingness to pay an additional premium for ASM gold is limited,** also given the currently very high gold price and the amount of gold needed for a gold bar.
- **Large actors are not involved:** the greater the processed volume, the greater the reputational risk. If public perception does not change, the chances that they will get involved are low.
- **Availability of material:** the quantities available are small and the ASGM value chain is prone to disruptions, leading to difficult operational planning and higher production costs.

- Working business models to integrate ASM gold into the value chain remain to be established. These would benefit all actors along the value chain and alleviate the costs for intermediary buyers of gold.
- Lack of collaboration, alignment, and recognition among existing standards and certification schemes.
- Lengthy and effort-intensive onboarding process for miners: many resources go into the development of relations with new producing partners, the obstacles for them to formalise are big and incentives missing.
- Formalisation strategy is not scalable: the aggregator approach, where larger volumes of gold are aggregated from a specified set of (formalised/certified) miners, opens a formal door to material from non-formalised sources; it may be easier to establish local and regional value chains involving clean gold.
- Trend towards recycling gold limits the will to engage in ASGM.
- Difficulty to create and maintain a supply-demand equilibrium.
- Geographic distance between gold extracting and final processing companies: it is difficult to support and supervise from afar.
- Political context in sourcing countries: often unstable; imminent outbreaks of political unrest restrict access and ability of experts to work on site.

#### Enabling factors:

- Sustainability teams of buyer companies are often deeply engaged in increasing sourcing from ASM, also due to existing context knowledge and established relationships with miners.
- Luxury goods sector: companies are in the position to make investments in ASM gold, since clients are willing to pay (gold is only a minor part of the end product). Further, procurement planning is often simpler than in the banking sector, where the demand for gold is more volatile.
- Some refiners are engaged, have substantial influence on value chain developments, and are interested in clean ASM gold sourcing: since supplies are limited, they are constantly looking for more sources, and are interested in limiting reputation risk.
- Brands and other customers of refineries are now more interested in engaging in the sourcing process than they were in the past.
- New due diligence regulations: can drive change towards cleaner sourcing and can act as insurance for refineries against reputational damage.
- Inclusion of the financial market: a market, in which investors could buy and sell gold at a premium would be necessary (but this is contingent on a break-through in supply to satisfy the demand).

- Buyers seek to diversify their ASGM sources to protect them against irregularities and disruptions.
- Consumer awareness: remains low, but is slowly increasing. More differentiated views and a tolerance for imperfections in a transition phase of the value chain could support the efforts of industry players.
- Coordination of efforts: stronger collaboration of actors along the value chain and close partnerships between downstream actors and local and international experts to assess the situation on the ground would benefit the development of good practices.
- Industry actors have the power to create demand and increase the overall sourcing volume; an ecosystem of players can enforce change together.

# 5 Conclusion

Our research set out to examine the readiness of intermediary Swiss market actors to engage with responsibly sourced ASM gold, exploring their willingness and capability to accommodate the additional costs and efforts required. Our literature review and empirical interviews point to growing interest among Swiss market actors, albeit at a cautious pace. The findings indicate a slow but positive shift from avoidance to active engagement among certain jewellers, watchmakers, and banks, if and when they have supportive refining partners, motivated by a mix of regulatory and political pressures, ethical considerations, as well as a desire to diversify the gold supply.

While some Swiss stakeholders show readiness to integrate responsibly sourced ASM gold into their supply chains – and some, in fact, accept substantial costs in terms of budget and work hours to do so – the challenges are considerable, particularly in terms of the aforementioned costs, certification, scaling up existing approaches, and ensuring due diligence in producing sites. Market conditions, both enabling and hindering, impact the feasibility of these efforts. The demand from downstream companies, although increasing, remains tempered by the complexities of ensuring supply chain transparency and the high standards required for responsible sourcing.

Although the development towards responsible supply chains is not driven by end consumers, civil society can and does have a considerable influence. We observed that several civil society actors adopt a nuanced stance on the subject; and critical voices and analyses regarding the negative consequences of ASGM are crucial in the discourse. However, they can block progress if they conclude that miners willing to change their practices should be excluded from the (Swiss) market entirely, simply because they cannot fulfil stringent due diligence requirements from the outset. Similarly, they may undermine progress if they penalise attempts of companies to transition to more responsible value chain models, which will inevitably include missteps and setbacks. Such overly critical voices and analyses may reduce intermediary buyers' willingness to invest in the development of a clean ASM gold value chain in the first place.

In general, the Swiss market holds some potential for ASGM operators looking for ways to achieve more responsible production, especially in countries where reliable certification providers are active. In the specific case of Madre de Dios, Peru, however, multiple challenges would need to be addressed before major Swiss market actors would consider sourcing in this region.

In conclusion, a certain part of the Swiss intermediary gold market is on a path to more responsible ASM gold sourcing practices, with a potential for significant influence on global ASM gold markets. However, realising this potential requires overcoming barriers and further fostering the conditions that enable responsible sourcing.

# 6 Lessons learnt

## **Where does the Swiss market currently stand in terms of its engagement and support for the ASGM sector?**

Some Swiss market actors have shown interest in responsibly sourced ASM gold and some have invested a considerable amount of resources into the development of such a value chain. Particularly stakeholders from the watch and jewellery sector have shown serious commitments, enabled through the support of refineries and certifiers. This reflects pressure for clean gold from the media and regulatory bodies, a growing awareness of related issues, and the desire for more sustainable sourcing practices. Compared to the situation internationally, the debate on ASGM in Switzerland is advanced and there is a perceptible shift from avoidance toward engagement.

However, to date, the overall market share of ASM gold remains very low – it made up barely 1% of newly mined gold processed through LBMA accredited refineries in 2020/21 (London Bullion Market Association n.d.). The market share is tempered by issues of supply consistency and the additional costs associated with responsible sourcing. The volatility in supply, among other factors, has prompted some Swiss market players to strive for a mixed sourcing approach of, for example, Chain of Custody-certified recycled and ASM gold, and to focus on minimum targets rather than an absolute number for the latter. This enables them to manage supply fluctuations effectively. If many actors took on this mixed sourcing approach and explored and developed feasible value chain models together, this could lead to the desired boost in clean ASM gold production. In this regard, one could say that the Swiss market is currently in a transitional phase.

At present, however, the Swiss market confronts challenges in realising its full potential to support the ASGM sector. Some of those are proportionality challenges which accompany the attempt to match small mining operations with industrial processes, others include technological, regulatory, local logistical, and governance barriers. It is often difficult for companies and institutes to access the necessary skills to understand, assess, and operate in the local context of producers. A further major restriction is the tainted public perception of ASGM and the associated risk of reputational damage. The lack of differentiated views of ASGM represented in the media and civil society discourages companies from adopting a progressive approach, in which missteps setbacks are an inevitable part of the learning process.

## **How does the Swiss market differ from other international markets and how can they learn from each other?**

The findings from our literature review and interviews suggest that actors in the Swiss gold market face challenges similar to those observed in other international markets. In particular, stakeholders in the North American and German watch and jewellery sectors appear to be at a comparable stage in their interest and commitment to incorporating more ASM gold into their products. However, these actors continue to encounter significant obstacles, including inconsistent supply chains, limited consumer interest, and reputational risks linked to the political and social dynamics of sourcing countries. Despite these challenges, their experiences could serve as valuable lessons to collectively advance more responsible sourcing practices for ASM gold on a global scale. This is especially relevant given that emerging gold markets such as the UAE and India currently do not widely apply sustainability and responsibility standards within their gold supply chains, which could potentially undermine the progress of this development. Engaging with new markets and

encouraging alignment with OECD Guidance might support the development of a shared commitment to responsible ASM gold sourcing.

### **What are the prospects for expanding the share of clean ASM gold on the Swiss market?**

For the Wyss Academy, it is essential not to encourage the expansion of ASM gold mining into currently unmined forested areas. Instead, the focus should be on channelling the currently sourced gold into more responsible, structured paths. This involves robust supply management including spatial planning and the delineation of clear spatial boundaries to ASM, encompassing effective monitoring and enforcement. The promotion of responsible practices can be supported by buyers in Switzerland, whereby it could be helpful to expand the market share of clean ASM gold derived from already existing mines.

Interest in and demand for responsibly sourced ASM gold among Swiss market actors is rising, albeit slowly. A differentiated discourse is occurring among experts, involving actors from the public and private sectors, academia, and NGOs. The paradigm shift away from avoidance and toward engagement is encouraging. However, scaling up existing (certification) approaches is challenging. Every new trade relation between mining operations and Swiss refineries (and retailers) requires substantial effort, and several years may pass from the onboarding process to the time when a refinery receives its first delivery.

Financial support for ASGM could substantially increase if the share of clean ASM gold in the financial and investment sector were enhanced, whether through a market where (funds backed by) such gold can be bought and sold at a premium, or in some other manner. However, the investment sector demands large volumes of gold, which are not always available from responsible ASGM. Gold buyers with more flexible, smaller volume requirements could help provide the necessary financial support, facilitating the production of larger volumes over time.

### **What does it mean for producers around the world who are ready to switch to clean ASM gold production? Does the Swiss market offer opportunities for them?**

For producers around the world ready to switch to clean ASM gold production, the Swiss market presents both opportunities and challenges. Although Swiss market actors are gradually becoming more receptive to responsibly sourced ASM gold, the majority still prefers to source gold from more stable, large-scale operations. For producers looking to transition to clean ASGM, the Swiss market offers potential, but they must navigate a complex regulatory landscape. In addition to complying with national formalisation laws and international due diligence regulations, they need to meet stringent certification standards such as those of the Fairtrade, Fairmined, or SBG certification, and agree to regular audits.

A few Swiss actors have acknowledged that new due diligence requirements could be helpful to support a transition towards more responsible ASGM, however, these requirements must be shaped in a way that enables transition processes allowing for some informality and also some very limited deforestation, if complemented by reforestation/restoration. They emphasise that ASM operations should not need to meet the highest standards from the outset, but that miners must credibly demonstrate willingness to embark on the change process as well as the necessary sense of urgency. However, this flexibility might be limited by due diligence regulations which are not context-adapted and, implicitly, by the poor image that ASGM has in society and the associated reputational risks for companies and financial institutes engaging in it.

## **What does it mean for producers in Madre de Dios who are ready to switch to clean ASGM?**

For producers in Madre de Dios, the Swiss market does not (yet) offer a feasible opportunity. Swiss gold buyers apparently cannot accept the risks associated with sourcing ASM gold from Madre de Dios due to significant concerns over environmental and social impacts. Deforestation is a major concern, as well as the safety of workers and communities. The lack of clear governance, safe transportation, and traceability further complicates the situation. While some actors recognise the potential for positive impacts in regions with high risks, the potential reputational damage makes it seemingly unviable for Swiss companies to engage. As a result, unless effective risk mitigation strategies are in place, it remains difficult for producers in Madre de Dios to tap into the Swiss market.

Actors such as the SBGA have, however, demonstrated (e.g. in Bajo Cauca, Colombia) that implementing risk minimisation measures is feasible, even in complex local contexts. Their active presence in the field has proven to inspire trust among gold buyers and facilitate engagement. The situation also differs when it comes to cooperation independent of gold sourcing relations, such as in reforestation efforts. In this context, some Swiss companies may be open to collaborative initiatives.

## **What changes could help to align the interests of Swiss industrial gold buyers with the sustainability goals of the miners and of the entire ASGM sector?**

- Creating clear regulatory frameworks: establishing responsive and appropriate regulations to support miners who are motivated to transition to formal and responsible ASGM.
- Enhancing market access and demand: improving infrastructure, e.g. offering options for safe transportation of gold out of the production zone and providing support for miners to access formal markets that allow for traceability and enable miners to sell the gold in a stable value chain environment and at a fair price; working toward supply-and-demand equilibrium and in the meantime protecting buyers from fluctuations in supply in diversifying clean ASGM sourcing options.
- Shaping new narratives on ASGM: presenting more nuanced perspectives that acknowledge the positive impacts of ASGM without diminishing the negative aspects; encouraging the media and the public to move beyond binary thinking, fostering tolerance for a more progressive approach.
- Building trust and capacity: fostering long-term relationships that increase trust, transparency, and understanding of responsible local mining practices, and enabling the professionalisation of miners through capacity building and financial inclusion.
- Strengthening partnerships and collaborations: encouraging multistakeholder partnerships to create a cohesive, supportive environment for responsible ASGM practices. Both partnerships including actors from the entire value chain as well as peer partnerships can be beneficial; Swiss actors heavily depend on experts to assess, monitor, and develop activities in ASGM sites to ensure due diligence. A (circular) market for clean ASM gold could become feasible if there was mutual recognition and harmonisation among different certification schemes.

**Are there any (knowledge) gaps in the transition toward more responsible ASGM that the Wyss Academy could potentially help fill?**

The Wyss Academy can help shape a differentiated public discourse around responsible ASGM in Switzerland and internationally. Throughout the elaboration of this paper some interesting avenues for research became evident, including on ASGM narratives in consumer countries and how they influence consumer behaviour; the quantification of investments on the part of companies into establishing alternative value chains; study of end consumer demand and preferences; and the identification and feasibility of a safe logistics solution in an ASGM region. A further valuable contribution that the Wyss Academy can make is that of engaging and linking with affected miners whose voices, perspectives, and concerns are still all too often excluded from important stakeholder dialogues and policy discussions.



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# Appendix

## Interview Guide

### Introduction to ID Mining Project

- Brief overview of the entire Wyss Academy research project on artisanal and small scale mining, then specific focus on the objective of the subproject "Swiss industry stakeholders", i.e., understanding the situation of gold buyers, processors, and sellers in Switzerland. Make clear that we are not trying to establish trade connections, but seek to capture current market conditions.
- Explanation of the approach: Clarification of confidentiality/anonymity, summary will be sent to candidates for review, Working Paper will be published online by the end of the year.
- Definition of terms: "clean" gold, ASGM, buyers ( $\neq$  end consumers)

### Warm-up

Warm-up questions, e.g., about the position of the interviewee within the company, understanding of "responsible" ASGM, experiences with the topic...

### Main Section – Guiding Questions

The following questions form the core of the interview. We aim to address them in every conversation. The further development of the conversation is deliberately open, allowing candidates the opportunity to delve into different areas according to their expertise and perspectives.

- a) Would Swiss industry stakeholders (not end consumers) be willing to incur additional costs (financially, time-wise) to source "clean" gold from small mines? (willingness, intrinsic motivation)
- b) Are the conditions created for Swiss industry stakeholders to source "clean" gold from small mines (with additional effort)? Or does the market allow for extra effort? (market conditions)
- c) Are Swiss industry stakeholders already incurring additional costs to source "clean" gold from small mines? (existing engagement)? Is there a premium? If yes, how high is it?
- d) Do you know what the situation is with other (Swiss) industry stakeholders?
- e) Are there no-gos of any kind related to ASGM?

On occasion we also ask:

- f) Would Swiss industry stakeholders be willing to (potentially with additional effort) source gold from an Amazon region like Madre de Dios (i.e. alluvial mining in tropical forest), if the gold demonstrably



- is mined from formal sources,
- is sourced without the use of mercury,
- is mined with small disruption to the Amazon (reforestation),
- and provides miners with a stable income covering their livelihood?

If, for example, the scenario for Madre de Dios was the following: It is a region with good spatial planning and land management, where the boundary between usage and protected areas is clearly defined, all conditions above are met.

Then further topics can be explored, e.g.:

- What considerations influence decisions to source verifiably responsibly mined gold from artisanal mining?

Etc.

### **Conclusion**

Summarise key points, provide opportunity for additional/concluding comments.

### **Debrief (without candidates)**

Reflection: What was particularly interesting or unexpected, where are gaps?

### **Summary**

Write a summary of the interview and share with the interviewees for revision.

## **ASGM in Peru**

### **Box 1: Definitions as compiled by USAID (2020)**

#### **Illegal mining:**

As defined by Legislative Decree No. 1100, illegal mining refers to activities carried out by individuals or groups using unauthorised equipment or machinery. These operations do not comply with the administrative, technical, social, or environmental regulations and are often conducted in prohibited areas, e.g., outside the mining corridor in Madre de Dios.

#### **Informal mining:**

According to Legislative Decree No. 1336, informal mining occurs in non-prohibited areas by individuals or entities registered in the Integral Mining Formalisation Registry (REINFO). These operations comply with administrative norms and follow the conditions set forth in the General Mining Law, including regulations for mining associations.

#### **Formal mining:**

As outlined in Legislative Decree No. 1336, formal mining refers to operations conducted by entities that have official authorisation to explore, extract, and process minerals. These entities must hold a valid concession title issued by the competent authority, complying with all legal requirements.

# Private sector governance schemes to foster responsible sourcing of gold

## Industry initiatives

Initially, industry initiatives often centred on ensuring product quality and upholding the overall reputation of the sector. They partly evolved into more comprehensive strategies, though still prioritising internal standards and self-regulation.

London Bullion Market Association (LBMA):

- **Nature:** The LBMA is an international industry association and a self-regulatory organisation.
- **Members:** Over 160 members, including producers, refiners, traders, fabricators, transporters, storage companies and financial institutions; membership is virtually a prerequisite for all major players in global gold trading.
- **Purpose:** It oversees the London Bullion Market – one of the most important trading centres for gold and silver, sets standards like the “Good Delivery List,” and ensures an ethical supply chain for gold (and silver) in the shape of bars.
- **Standards:** The Responsible Gold Guidance is an important component of the “Good Delivery List” standard, effectively making the OECD Due Diligence Guidance a mandatory requirement for companies aiming to be included on the “Good Delivery List” (Pieth 2019). In principle, the Responsible Gold Guidance replicates the OECD Due Diligence Guidance and relies on third-party auditing of refineries (OECD 2018).
- **Criticism:** According to the OECD Alignment Assessment (2018), it remains questionable if LBMA refineries adhere to their due diligence responsibilities throughout the entire upstream value chain or rather cease the evaluation at their immediate supplier. The OECD assessment specifically criticised the auditing practices, doubting whether auditors had the required technical competencies to carry out verifications and were sufficiently diligent in testing the quality of refiner’s reports, which often were “generic”, and “lacking detail”. In response, the LBMA has launched a toolkit for auditors in 2023, that complements their Third Party Assurance Guidance (LBMA 2023).

Responsible Jewellery Council (RJC):

- **Nature:** The RJC is a not-for-profit organisation.
- **Members:** Over 1900 members, including a wide range of participants in the jewellery and watch industry from miners to retailers, but predominantly downstream actors such as manufacturers, wholesalers and service industries.
- **Purpose:** Its objective is to improve responsible ethical, social, human rights and environmental conditions in establishing responsible business practices throughout the jewellery supply chain (Responsible Jewellery Council 2023).

- **Standards:** The RJC certifies its members against two standards, the Code of Practices (CoP) and the Chain of Custody (CoC). The CoP outlines provisions designed to promote responsible business practices across the diverse jewellery and watch supply chains and applies to all RJC members. Members undergo regular audits (Responsible Jewellery Council 2023). In contrast, the CoC is voluntary and applies specifically to gold, silver, and the platinum group metals. While the CoP addresses a company's overall business practices, the CoC focuses specifically on the segregation and traceability of certain materials (e.g. gold). For further information on RJC standards and their implications for ASGM, please refer to Schäli, Bürgi Bonanomi, and Burger (2025).
- **Criticism:** Limitations include that the CoP relies entirely on suppliers' pledges when it comes to information on the gold's origin (Becker 2018) and does not mandate publicly accessible reporting (OECD 2018). All RJC members are required to adopt the CoP within the first two years of membership, however, they are free to adopt the more ambitious CoC. In 2024, 26% of RJC members have adopted it (D. Finn, personal communication, September 16, 2024). Certain supply chain actors, such as mining operations and traders, are largely left uncertified (Herzog et al. 2015). The RJC's work was judged "not sufficiently thorough" (OECD 2018) and "a weak assurance" (Becker 2018). In response, the RJC adapted the two standards in 2024.

#### World Gold Council (WGC):

- **Nature:** The WGC is a market development organisation established by the world's leading large-scale gold mining companies
- **Members:** 32 members, primarily large and medium-sized gold mining companies from around the globe.
- **Purpose:** It aims to be the global authority on the market, stimulate and sustain the demand for gold, and provide industry leadership. Though its focus is on large-scale mining, the WGC advocates for the formalisation of ASGM to improve access to markets, fair pricing, and environmental and safety practices.
- **Standards:** Their Conflict-free Gold Standard seeks to operationalise the OECD Due Diligence Guidance (World Gold Council 2012) and offers comprehensive assessment tools for their members.
- **Criticism:** Experts again criticise the system of mere self-evaluation and limited transparency (e.g. Pieth 2019).

### Multistakeholder initiatives: Certification schemes and beyond

In addition to the business initiatives, various certification schemes have been developed jointly by actors not originally directly involved in gold trade (i.e., not as producer, processor, intermediate trader, or consumer, but rather assuming the role of a surveillance authority). They differ from the private sector initiatives mentioned above insofar that they do not seek to ensure the quality of the product, but instead rather focus on the way of extraction.

In 2009, the Alliance for Responsible Mining and Fairtrade International started to co-create the Fairtrade and Fairmined Standard for ASM gold. However, four years later they chose to end their partnership and separate the dual Fairtrade and Fairmined label into two distinct certification schemes. This decision was precipitated by tensions that had multiple causes (Oakley 2022) and was largely driven by the Alliance for Responsible Mining's concern that the distribution channels did not create sufficient demand for all certified miners to sell their gold (Choyt 2013). In other words: the market was not ready to absorb the certified gold, or, more precisely: there was no supply-demand equilibrium (Herzog et al. 2015; Oakley 2022).

Fairmined:

- **Nature:** Certification programme managed by the Alliance for Responsible Mining, not-for-profit initiative.
- **Purpose:** Fairmined aims to support formalisation of mine cooperatives as well as ecological awareness on both producer and consumer side, protection of work conditions, and safeguarding of origin tracing.
- **Members:** Fairmined members include certified mines, authorised suppliers, and licensed brands. The initiative certifies mines across three countries: Colombia, Ecuador, and Peru, including the Tauro Fátima Miners Association (AMATAF, four concessions) in Madre de Dios (Rojas 2023). About 500 businesses are licensed brands that can use Fairmined gold in their products (Fairmined 2024a). Fairmined licensed Swiss companies are Chopard (luxury watchmaker and jeweller), four goldsmiths, and the refineries MKS Pamp, Argor-Heraeus, Valcambi, and PX Précinox (Fairmined 2024a, actors list 2024).
- **Standards & premium:** Fairmined offer two standards: Fairmined Gold does not prohibit the use of mercury nor cyanide, but promotes their responsible management. In addition to a fair price, certified miners receive a premium of USD 4000/kg. Fairmined Ecological Gold is an assurance that the gold was produced without application of toxic chemicals; miners who hold this certificate receive an additional premium of USD 6000/kg. Migros Bank considers Fairmined Ecological Gold to be the “currently most sustainable available” on the market (Zaugg 2021).
- **Sourcing volume:** 130 kg in 2022 (Fairmined 2023).
- **Criticism:** Few mining operations are prepared to undergo the rigorous certification process. It is questionable if all certified entities always adhere to the high standards and do not, e.g., continue to use mercury for extraction (Pieth 2019).

Fairtrade:

- **Nature:** Certification programme managed by various organisations, including the Max Havelaar Foundation, not-for-profit initiative.
- **Purpose:** The declared objectives are similar to those of Fairmined: improve working conditions, strengthen mining organisations to advocate for responsible policies, environmental management, social security, gender equality, community well-being, market access, and better governance. Promoting formalisation is also a key strategy for Fairtrade (Fairtrade International 2013).

- **Members:** Fairtrade certifies mining organisations in Peru, buyers and processors of Fairtrade gold are almost exclusively located in Western Europe. Among Swiss purchasers of Fairtrade gold are some 30 goldsmiths and various cantonal banks (Fairtrade Schweiz 2024b). The banks sell small bars in the range between 1-20 g, and in 2022 the Basel Cantonal Bank launched a gold fund that is backed by Fairtrade gold.
- **Standards & premium:** Analogously to Fairmined, buyers pay a premium of USD 2000/kg for Fairtrade Gold in addition to a minimum price, and for Fairtrade Ecological Gold, which is produced without mercury and cyanide, an extra premium of 15 % of the LBMA reference gold price (Fairtrade Schweiz 2024a).
- **Sourcing volume:** 940 kg in 2022 (Fairtrade International 2024).
- **Criticism:** Often similar to the criticism of Fairmined, see above.

Multistakeholder initiatives are a popular means of contributing to the discourse around gold value chains & sustainability. A recent example is a joint workshop on responsible gold organised by a Swiss private bank, the refinery MKS Pamp, and Originalluxury in 2023 (Originalluxury 2023). Originalluxury is an academic initiative aimed at enhancing transparency and traceability in the luxury sector and involves several institutions from Lausanne such as the University with its Swiss Center for Luxury Research, the federal institute of technology, and a local business school.

A further example is the collaboration between the NGO Earthworm and three Swiss refineries (PX Précinox, Metalor, Argor-Heraeus), which, supported by the LBMA, jointly developed ASM gold sourcing guidelines and related technical guidelines as well as a risk assessment tool (Earthworm Foundation 2024). The fundamental idea is to integrate intermediate ore processing plants into the ASM gold value chain which do not have an LBMA accreditation but commit to undergoing an audit. The objective is to establish a “practicable” methodology with the potential to scale up the sourcing volumes of ASGM. A stakeholder consultation workshop on the guidelines was held in June 2024 (from an interview conducted for this working paper, 2024).

## Public-private partnerships

Swiss Better Gold Association (SBGA):

- **Nature:** The SBGA is a not-for-profit organisation.
- **Purpose:** It was created 2013 by companies in Switzerland (Argor Heraeus, Cartier, Metalor, MKS Pamp, Impact Finance). Its main goal is to support and develop sustainable and responsible supply chains for gold, particularly focusing on artisanal and small-scale mining.
- **Role:** The SBGA is the entity responsible for organising and managing the Swiss Better Gold Initiative. It collaborates with the Swiss State Secretariat for Economic Affairs (SECO) to implement this initiative in public-private partnership, although this partnership is currently in a state of flux and the future form of cooperation has not yet been determined. Currently, the SBGA comprises 24 members, mainly representatives of refineries, jewellers and watchmakers, and financial institutions (Argor Heraeus, Audemars Piguet, aXedras, BDL5, Breitling, Cartier, Chopard, Degussa Goldhandel

AG, Fredy Sadik, Helvetikor, Impact Finance, La Prairie, LVMH Watches & Jewelry, Metalor, MKS PAMP, OCIM, Precious Watch Factory, PX Group, Raiffeisen, Richemont, Solidus, Swiss Positive Fund, UBS, Valcambi).

Swiss Better Gold Initiative (SBGI):

- **Nature:** The SBGI is an initiative, essentially a project.
- **Purpose:** The initiative's main objective is to continuously improve the social and environmental conditions of artisanal and small-scale mining in Peru and Colombia, and to create responsible gold supply chains from these regions to the market. The initiative's focus is on increasing the demand for certified ASM gold, and it also supports mines in the process of formalising, as well as local governments. It is a business-to-business initiative, while Fairmined and Fairtrade tend to concentrate more on the consumer side.
- **Role:** The SBGI is the practical expression of the goals set by the SBGA and SECO, involving on-the-ground activities, policy dialogues, and knowledge dissemination to achieve responsible mining practices. SBG accreditation according to certain sourcing criteria opens access to the Swiss market for partner mines.
- **Premium:** SBGA members who source from accredited producers pay a premium of USD 1000/kg.
- **Sourcing volume:** 3900 kg in 2022 (Swiss Better Gold Association 2023).
- **Criticism:** The media and Swiss political landscape reacted with partly harsh criticism after a tragic accident in May 2023 in a Peruvian SBG-accredited mine, in which 27 miners lost their lives (Brouzos 2024). The SBGI is furthermore criticised for inheriting some deficits of the RJC standards, upon which it is built (Pieth 2019, see criticism RJC standards below "industry initiatives" in this same section).

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