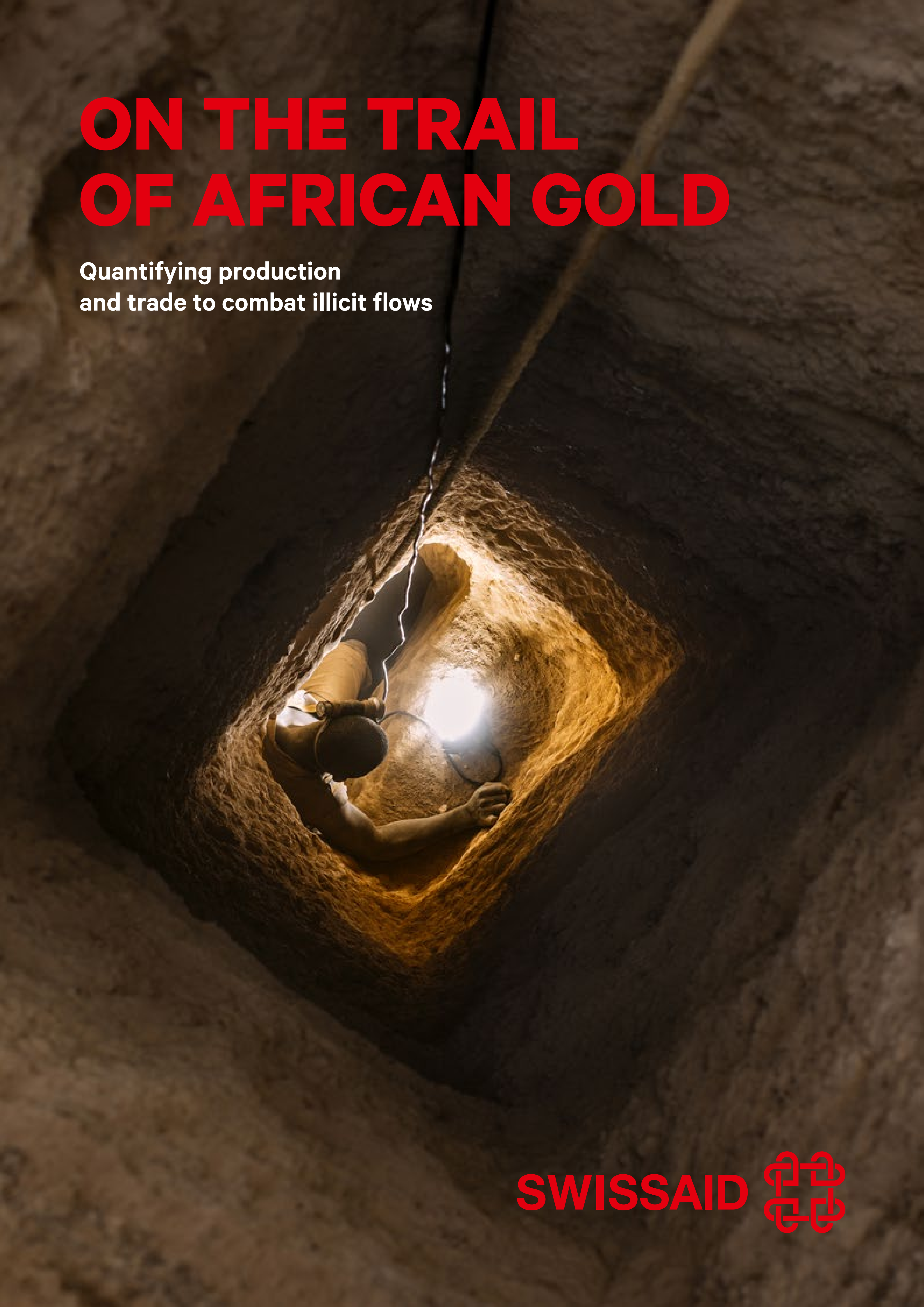
ON THE TRAIL OF AFRICAN GOLD

Quantifying production and trade to combat illicit flows



SWISSAID

ABBREVIATIONS

AGR	African Gold Refinery
ARM	Alliance for Responsible Mining
ASFCMP	Swiss Association of Manufacturers and Traders in Precious Metals
ASM	artisanal and small-scale mining
CAR	Central African Republic
COPMC	Central Office for Precious Metals Control (Switzerland)
DDTrO	Ordinance on Due Diligence Obligations and Transparency Regarding Minerals and Metals from Conflict Areas and Child Labour (Switzerland)
DMCC	Dubai Multi Commodities Centre (United Arab Emirates)
DMRE	Department of Mineral Resources (South Africa)
DRC	Democratic Republic of Congo
DTIC	Department of Trade Industry and Competition (South Africa)
EITI	Extractive Industries Transparency Initiative
FATF	Financial Action Task Force
FCSC	Federal Competitiveness and Statistics Centre (United Arab Emirates)
FDF	Federal Department of Finance (Switzerland)
FGR	Fidelity Gold Refinery (Zimbabwe)
FIU	Financial Intelligence Unit (United Arab Emirates)
FOCBS	Federal Office for Customs and Border Security (Switzerland)
GI-TOC	Global Initiative against Transnational Organized Crime
ICGLR	International Conference on the Great Lakes Region
LBMA	London Bullion Market Association
OECD	Organisation for Economic Co-operation and Development
PMCA	Precious Metals Control Act (Switzerland)
PMCO	Precious Metals Control Ordinance (Switzerland)
RJC	Responsible Jewellery Council
SARS	South African Revenue Service
UAE	United Arab Emirates
UNCTAD	United Nations Conference on Trade and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNIDO	United Nations Industrial Development Organization
UNSD	United Nations Statistics Division
USD	U.S. dollar
USGS	U.S. Geological Survey
WGC	World Gold Council
WTO	World Trade Organization

IMPRESSUM

"On the trail of African gold: quantifying production and trade to combat illicit flows", research carried out by SWISSAID and published in May 2024.

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SWISSAID is a Swiss foundation, free of any political or religious affiliation, active in nine countries in the South. Through its various projects, it supports disadvantaged populations so that they can improve their living conditions and assert their rights. In terms of development policy, SWISSAID is committed to transparency in the management of raw materials, corporate responsibility, respect for food sovereignty, gender equality and agroecology.

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KEY RESULTS

Gold production in Africa

- **Each year, between 321 tonnes and 474 tonnes of gold produced through artisanal and small-scale mining (ASM) are not declared in Africa** (corresponding to a value of **between USD 23.7 billion and USD 35 billion** at the price of gold on 1 May 2024). In 2022, this represented between 72% and 80% of total ASM gold production or between 32% and 41% of total gold production (artisanal or small-scale and industrial or semi-industrial) on the African continent.
- In nine African countries, the estimated production of undeclared ASM gold exceeds 20 tonnes per year.
- Total gold production in Africa has reached between 991 tonnes and 1,144 tonnes in 2022. This represents between a quarter and a third of global production of mined gold in 2022.
- More than half of the gold extracted in Africa in 2022 came from ASM.
- Forty-one of the 54 African countries have an estimated ASM gold production of at least 100 kg per year and 15 of these countries produce ASM gold, but do not officially report any production.

Comparison of gold production in Africa and trade in African gold

- The vast majority of African gold that is not declared at the production stage or for export is declared for import into non-African countries. In other words, gold originating from clandestine African circuits acquires a legal existence when it enters the international market (in particular via the UAE).
- A comparison with import data shows that undeclared ASM gold production in Africa is very likely to reach, or even exceed, the high end of the range of estimates calculated by SWISSAID, i.e. 474 tonnes.
- Most of the gold produced by ASM in Africa is not declared for export.

Trade in African gold

- **More than 435 tonnes of gold was smuggled out of Africa in 2022, representing more than a tonne a day.** At the price of gold on 1 May 2024, this corresponds to a value of **USD 30.7 billion**. The overwhelming majority of this gold was imported into the United Arab Emirates (UAE) before being re-exported to other countries.
- **In 2022, 66.5% (405 tonnes) of the gold imported into the UAE from Africa was smuggled out of African countries. Between 2012 and 2022, 2,569 tonnes of African gold imported into the UAE was not declared for export in African countries.** At the average price of gold over these eleven years, this corresponds to a total value of **USD 115.3 billion.**
- Twelve African countries are involved in smuggling more than 20 tonnes of gold a year. Most gold smuggling in Africa takes place in Mali, Ghana and Zimbabwe.
- Gold smuggling in Africa more than doubled between 2012 and 2022.
- The vast majority of African gold is shipped to a few countries. The UAE, Switzerland and India were the three main countries importing gold from Africa between 2012 and 2022. In 2022, almost 80% of African gold imported abroad went to these three countries, with over 47% going to the UAE alone. These percentages are even higher if we correct for artificial statistical discrepancies.
- The majority of African industrial gold was exported to South Africa, Switzerland and India, while 80 to 85% of African ASM gold was exported to the UAE.
- Between 2012 and 2022, the vast majority of declared intra-African gold trade involved South Africa as a destination country. However, most of the African gold imported into South Africa was then re-exported to non-African countries.

Availability and reliability of data on the gold sector in Africa

- When collecting data on gold production and trade in Africa, SWISSAID found that much of this data is not in the public domain or simply does not exist.
- When SWISSAID analysed the data collected, it found that many figures were erroneous, incomplete, inaccurate, unreliable or inconsistent. The South African authorities' statistics on the gold trade in South Africa, in particular, are opaque and do not give an accurate picture of the gold trade in that country.

CONTENT

INTRODUCTION

A gold miner in an artisanal mine, Manajary region, Madagascar.

The idea for this study was born over four years ago. SWISSAID has been working for many years on the issue of raw materials, particularly gold, and in 2020 published a report on the gold trade between the United Arab Emirates (UAE) and Switzerland. As part of this research, the organisation was confronted with a lack of data on gold flows from Africa and the passive attitude of several stakeholders involved in the illegal trade of the precious metal. SWISSAID therefore decided to carry out a new study, with the aim of shedding light on the African gold sector and raising awareness of the scale of the problem. This study is unprecedented: it is the first time an organisation has compiled, analysed and cross-referenced production and export data from all African countries and import data from partner countries over a period of more than ten years. The research and analysis were tedious. But given the issues specific to the gold sector, they were necessary. Besides this report, they have led to descriptions of the gold sector in each African country, which will gradually be made available online at www.africangoldreport.org starting in July 2024.

Africa is the world's main gold-producing continent, and the yellow metal plays an immense and contrasting role there. It is, among others, a source of income for millions of artisanal miners, the main source of revenue for many governments, a means of financing armed groups, and the cause of serious human rights violations and environmental degradation. In recent years, the sharp rise in the price of gold and the subsequent gold rushes in many countries have only increased the socio-economic impact of this sector on the African continent.

From the rugged terrain of Africa's gold mines to the hushed salons of international conferences, many people claimed that a study such as the one conducted by SWISSAID would be difficult to carry out. Their position was understandable given that quantifying the production and trade of declared and undeclared gold on the African continent represents an immense challenge. And yet, despite the inherent limitations of such research, SWISSAID succeeded in quantifying these flows and describing the mechanisms at work.

Shedding light on the trade in African gold is essential to push governments to face up to their responsibilities. The SWISSAID study raises a number of problems, in particular: huge quantities of gold are smuggled out of Africa, controls at customs and on production sites are inadequate, some statistics are opaque and others have even been falsified. Governments must no longer be able to hide behind the lack and poor quality of data and other information to justify their inaction; they must shoulder their responsibilities, in particular by stepping up controls and working to formalise the sector.

SWISSAID hopes that its study will help to strengthen the commitment of governments and industry actors to a more responsible gold sector. In the long term, this should make it possible to improve the working and living conditions of millions of artisanal gold miners and their families, increase the revenues of African countries and combat human rights and environmental abuses. Left at the mercy of unscrupulous actors and working in often deplorable conditions, artisanal miners are the first to suffer from the illicit nature of much of the African gold trade. This new SWISSAID study is therefore in line with the organisation's mission, which is to work to improve the living conditions of the poor and the prospects of vulnerable populations.

2 METHODOLOGY

This study is the result of research carried out by SWISSAID between 2021 and 2024. During this period, the organisation collected, analysed and cross-referenced a considerable amount of information and statistics on the production and trade of African gold. The study covers all 54 African countries and the main destination countries for gold exported from the continent. It covers an eleven-year period, from 2012 to 2022. The main results of the study, including figures on total declared and undeclared production and total declared and undeclared trade in African gold, are included in this report. Statistics, analyses and results for individual African countries will be progressively made available online at www.africagoldreport.org from July 2024.

The methodology consists mainly of a cross-analysis of the data and is based on the following assumption: when there is no internal consumption and the gold is not stored in an African country, the quantities of gold produced or imported into this country must correspond to the quantities of gold exported from this country and the quantities of gold imported into the partner countries. To carry out this analysis and identify the origin of data discrepancies, SWISSAID collected statistics and information for every African country on: declared and undeclared gold imports, production and exports, and declared imports into partner countries. Several control elements were integrated into the analysis: SWISSAID took into account both weights and trade values, used several sources for a given flow, used statistics and information published or communicated by companies and by industry standards, and systematically checked for each country whether there was a jewellery or banking sector and whether gold was stored within the country. By analysing, cross-referencing and comparing the data and information collected, SWISSAID was able to quantify the declared and undeclared production and trade of gold in Africa.

Data sources

Some information and statistics collected by SWISSAID are in the public domain. The organisation has found them in the following types of sources: publications by state agencies, company reports, open access or fee-based databases, press articles, studies by civil society organisations, international organisations and university researchers. SWISSAID supplemented this corpus by collecting information and statistics, including unpublished figures, from over 500 stakeholders (from the public, private, academic and civil society sectors), through email exchanges, telephone calls and face-to-face interviews.

Regarding **gold production in African countries**, SWISSAID collected data on declared artisanal and small-scale mining (ASM) gold production, industrial and medium-scale gold production and total gold production. The organisation also looked at estimates of undeclared ASM gold production. For declared production, SWISSAID used official data, in particular statistics published or communicated directly by African states, including through their central banks, and the annual reports of the national chapters of the Extractive Industries Transparency Initiative (EITI). In order to detect any errors, SWISSAID compared these statistics with data contained in mining company reports and in various international databases (e.g. that of the U.S. Geological Survey), as well as with data collected from stakeholders. Regarding undeclared ASM gold production, SWISSAID looked at studies of this subsector in each African country and compiled the available estimates.

Regarding the **trade in African gold**, SWISSAID collected statistics and information on official and smuggled gold imports into African countries, official exports of ASM, industrial and total gold as well as smuggled gold exports from African countries, and official imports of African gold into non-African countries. As far as official data is concerned, the organisation relied in particular on statistics published or communicated directly by African and non-African states, fee-based databases giving access to certain national statistics, the annual reports of the African national chapters of the EITI and UN Comtrade (the United Nations database on international trade, which lists all imports and exports of goods from 161 countries)[1]. Regarding official imports of African gold into non-African countries, SWISSAID also used data reported by member refineries of the London Bullion Market Association (LBMA) in its analysis. Finally, information on gold smuggling comes from reports by civil society organisations and international organisations, and from interviews with government officials and other experts.

Existing studies

Numerous studies have examined the problem of illicit gold flows in Africa[2]. Some focus on the continent as a whole, others on a specific region or country. Most highlight the strong commercial link with the United Arab Emirates, the main destination for ASM gold from Africa. Three in particular are worth mentioning:

- In a report published in 2020, the United Nations Conference on Trade and Development (UNCTAD) estimated that illicit financial flows linked to the extractive sector in Africa totalled at least USD 40 billion in 2015[3]. According to UNCTAD, gold accounted for 77% of the total under-invoicing of African extractive exports[4]. Following criticism, UNCTAD improved its methodology and adjusted its analysis. The estimated importance of the gold sector was reduced from 77% to 40%[5]. The main change concerned the figures for South Africa.

- Reuters published a 2019 analysis of gold imports from 46 African countries to the UAE in 2016. The news agency showed that the authorities of 25 of these countries did not report their country's gold exports to the UAE to UN Comtrade, while their Emirati counterparts, on the other hand, reported gold imports from these countries worth a total of USD 7.4 billion. Reuters also showed that the quantities reported by the authorities of 21 African countries as gold exports to the UAE were 67 tonnes less (with a corresponding trade value of around USD 3.9 billion) than the quantities reported by the Emirati authorities as gold imports from these countries[6].

- Bloomberg published a similar analysis for 2021. Using UN Comtrade statistics for the year 2020, the news agency found that the gap between gold exported by African countries to the UAE and gold imported by the UAE from Africa amounted to at least USD 4 billion[7]. Its analysis showed that gold smuggling involved at least nine African countries.

In their analyses of the African gold trade, UNCTAD, Reuters, Bloomberg and others use a method commonly known as "mirror data analysis": they compare exports from country A to country B with their mirror image, i.e. imports from country A to country B (using UN Comtrade, for example)[8] and highlight the discrepancies. This method is often used to identify and quantify illicit flows. It is, however, open to criticism, as discrepancies between the data and its mirror image do not necessarily correspond to illicit flows; they may also be due to other factors. SWISSAID also carried out a mirror data analysis in its study but took into account the inherent limitations of this method. In particular, the organisation took various steps to ensure that the discrepancies it had identified were not artificial but reflected reality.

A shovel in an artisanal gold mine in Tanzania.

Limits to comparisons between customs statistics

The United Nations Statistics Division (UNSD) provides explanations on the discrepancies between customs statistics in Annex 9.C of the reference work *SCIM 2010: Handbook for Statisticians*[9]. SWISSAID has taken note of these explanations, which has led it to take the following measures:

- *Trade system.* Countries can choose between two systems for compiling trade data: the general system and the special system. In the general trade system, the statistical territory corresponds to the economic territory. In particular, it includes re-imports and re-exports, which is particularly important in the case of the gold trade. In the special trade system, the statistical territory comprises only part of the economic territory. According to the strict definition of this system, goods imported for inward processing (e.g. for refining, in the case of gold) and goods passing through a free zone or customs warehouses are not recorded in the statistics.
  The application of the strict special trade system by South Africa is a major problem, as gold imported for refining is not recorded in South Africa's statistics. **SWISSAID has taken into account the artificial discrepancies arising from the application of the special trade system, in particular the discrepancy between gold exports from African countries to South Africa and the mirror data.**

- *Interpretation and application of product classification.* There are differences as well as errors in the interpretation and application of tariff codes.

For example, if the authorities in one country report gold exports using tariff code 7108.12[10] and those in a partner country report imports of the same gold using tariff code 7108.13[11], this creates an artificial discrepancy. SWISSAID has observed this problem on several occasions in the course of this study, particularly between tariff codes 7108.12 and 7108.13. In order to avoid this problem, **SWISSAID has decided to use only tariff code 7108**, which includes tariff codes 7108.11[12], 7108.12, 7108.13 and 7108.20[13].

- *Trade value and currency conversion.* Application of the rules of the World Trade Organisation (WTO) automatically creates a discrepancy between the commercial value of gold declared for export in a country and that of gold declared for import in the partner country. This is because the value declared on export will be calculated "free on board" (FOB), while the value declared on import will be calculated "cost, insurance, and freight" (CIF). In addition, the value of a country's gold exports may differ from the value of imports of the same gold into the partner country if the exchange rate of one of the countries' currencies fluctuates significantly, especially if the comparison is made on an annual basis. Fluctuations in the gold price can also lead to artificial discrepancies in cases where the analysis is based solely on the commercial value. To avoid these problems, **SWISSAID has chosen to compare gold weights (quantities)**, which is much more reliable. This choice was also motivated by the fact that LBMA data is only available by weight. However, commercial values were used extensively as a control tool, to verify the reliability of the data and the risk of customs under-declaration.

- *Allocation to the partner country.* Artificial discrepancies are sometimes observed in customs statistics in cases where goods transit through third countries between the country of origin and the country of destination. For example, if gold is mined and refined in country A, exported to country B and then re-exported to country C without undergoing any processing, the statistics for country C will show that the gold was imported from country A, creating artificial discrepancies between the statistics for the different countries. To avoid this problem, **SWISSAID has taken into account not only the country of origin, but also the country of dispatch**. However, it has not always been possible to apply this measure, as some countries do not indicate the country of dispatch in their import statistics or have refused to provide SWISSAID with this information.

Other factors, such as registration dates in different years, different application of the rules of origin, different reference periods or an unknown final country of destination, can cause discrepancies in customs statistics. SWISSAID took these factors into account in its analysis but found few cases where they could be used to explain the discrepancies observed.

Two employees in an artisanal gold mine in Tanzania.

Limitations of mirror data comparison based on UN Comtrade

The methodology used by SWISSAID in this study includes a comparison of mirror data based on UN Comtrade,[14] but goes well beyond this. In particular, it includes the production component and takes into account other sources in addition to UN Comtrade, for several reasons:

- Some states have national customs statistics but do not report them to UN Comtrade. An analysis based solely on UN Comtrade data would ignore these statistics and would wrongly consider that this gold had not been declared when crossing the border. To avoid this problem, **SWISSAID has collected national customs statistics from all African countries and integrated them into its analysis**.

- Some data reported by states to UN Comtrade do not correspond to other data, which are also official, e.g. those published directly by the states themselves or those published by the national chapters of the EITI in their annual reports. **SWISSAID has compared the UN Comtrade data with other official data** in order to identify any errors. **It has also compared gold values with gold quantities**, in order to detect any inconsistencies in customs declarations, which could be the result of false declarations or errors. In some cases, **it has analysed not only annual data**, but also monthly data, so as to identify the source of any aberrations or other obvious errors.

- Gold smuggled from country A to country B before being legally exported from country B to country C does not necessarily appear as illegal gold. If the data for country B matches that for country C, no discrepancy will be visible in UN Comtrade. To take account of gold smuggling via transit countries, **SWISSAID has included the quantities of gold produced by each African country in its analysis and has endeavoured to trace the gold flows back to the true country of origin**. If a country's total gold production (declared and undeclared) is greater than its exports, or if a country's gold exports are greater than its total production and imports, there is a risk that the gold in question is linked to smuggling.

- Authorities do not always correctly report the destination of gold leaving their territory to UN Comtrade. An error at this level gives rise to a discrepancy, even if the gold in question has been declared for export. In the context of an analysis of the gold trade between two countries, this discrepancy may be misinterpreted as an indication of the presence of illicit flows. To avoid this problem, **SWISSAID not only analysed bilateral trade involving African countries, but also looked at total gold exports from these countries**.

SWISSAID has taken additional steps to ensure the quality of the statistical discrepancy analysis. In particular, it conducted research and interviews to:

- Identify countries where there is a large banking or jewellery sector or where central bank gold reserves have fluctuated.

- Determine the type of gold declared, in particular whether it is fine gold or raw gold, as differences in this respect between countries can generate artificial statistical discrepancies.

- Determine the reference period, as data collected during a fiscal year (e.g. July-June) is not comparable with data collected during a calendar year (January-December).

Difficulties encountered and limitations of the study

The authors of the study faced many challenges in quantifying gold production and trade in Africa. In particular, they were confronted with a lack of information in the public domain and an absence of figures on many flows. They had to approach the relevant state authorities, and even other stakeholders, to obtain the missing data, which often required considerable effort. In some cases, the state authorities refused to provide the data or were unable to do so because the data in question did not exist. The authors of the study also had to deal with the low reliability and consistency of some of the available data and attempt to correct obvious errors. The challenges and problems posed by data on the gold sector in Africa are described in section 6.1 (p. 81).

This study is limited to quantifying declared and undeclared gold production and trade in Africa; it does not contain any calculation of the total revenue losses associated with gold production and trade for African states. Such a calculation would require further research into the taxation regimes of each country. Furthermore, this study only traces African gold flows to the first non-African destination country. As the gold is generally refined there, it is very complicated, not to say impossible, to follow the flows to their final destination, i.e. where the gold will be stored or consumed. •

3 PRODUCTION

3.1 INDUSTRIAL AND SEMI-INDUSTRIAL GOLD PRODUCTION

The legal definitions of what constitutes a large-scale or industrial gold mine vary from one producing country to another. SWISSAID has drawn on the Organisation for Economic Co-operation and Development (OECD) Due diligence guidance for responsible supply chains of minerals from conflict-affected and high-risk areas (hereafter OECD Guidance), which defines "medium" and "large"-scale operations as "gold extraction activities that are not considered artisanal or small-scale".[15] For this reason, this chapter focuses on both industrial and semi-industrial gold production in African countries.

Industrial mining is characterised by high capital investment, low labour intensity and the use of sophisticated exploration, extraction and processing equipment. Semi-industrial mining, on the other hand, requires less capital and less sophisticated equipment. Industrial operators are generally large mining groups, while semi-industrial operators are generally smaller companies.

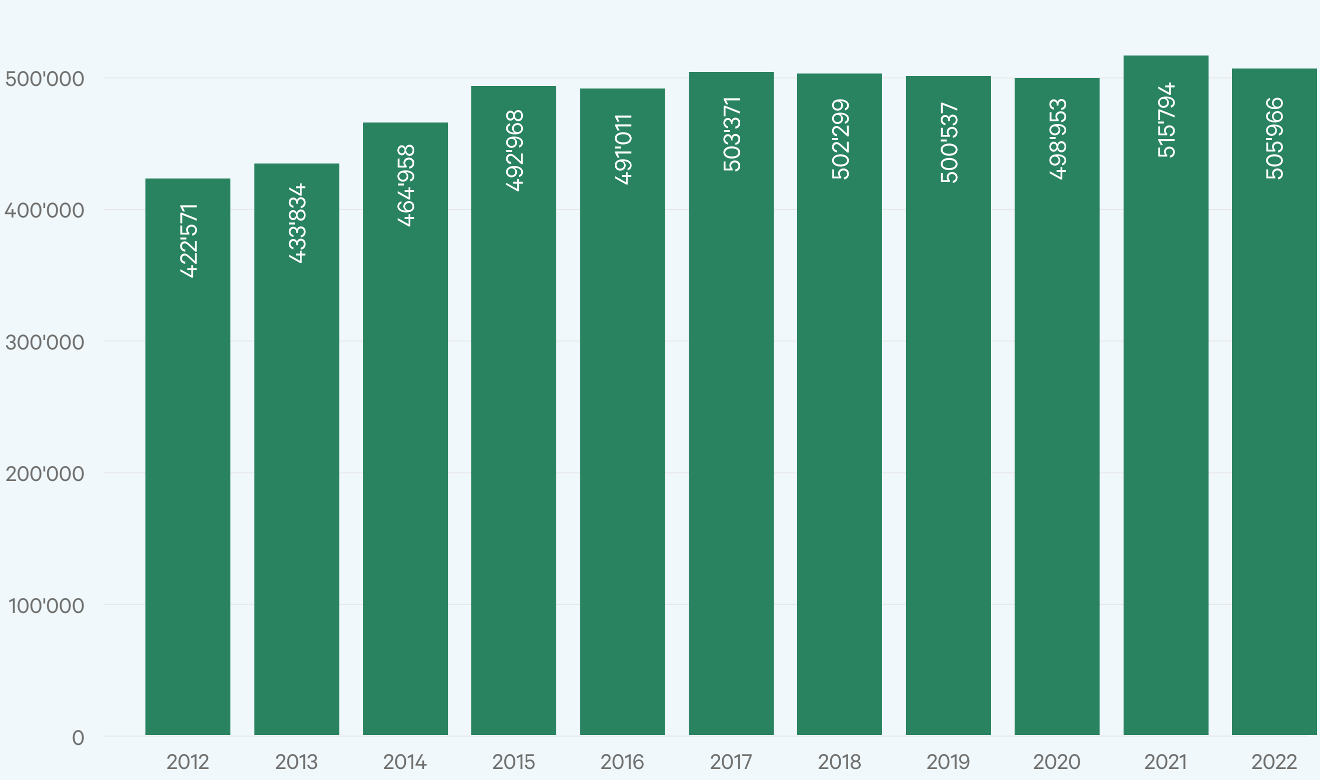
Annual industrial or semi-industrial gold production in Africa has increased over the past decade (see Figure 1). It has risen from 422.6 tonnes in 2012 to 506 tonnes in 2022, an increase of more than 80 tonnes. The total commercial value of industrial gold produced in 2022 is USD 28.3 billion[16]. Over the entire period 2012–2022, some 5,332 tonnes of gold will have been extracted industrially from the African ground, with a corresponding value of USD 242 billion[17].

During this period, more than 125 gold mines were industrially exploited in Africa[18]. Canadian, South African and Australian mining companies are the most active in this sector.

Between 2012 and 2022, gold was mined industrially or semi-industrially in more than 26 African countries (see Figure 2). During this period, industrial gold production increased in the majority of countries. It almost doubled in Mali and Burkina Faso, and even

FIGURE 1 – Industrial and semi-industrial gold production of all African countries

Kilograms



Sources: statistics of the African states, see appendix 2.

increased fivefold in Côte d'Ivoire. On the other hand, other countries saw their industrial gold production fall. This is the case in South Africa, where production has fallen from 180 tonnes in 2011 to 84 tonnes in 2022. In 2022, Ghana was the largest producer of industrial gold in Africa (95.8 tonnes), followed by South Africa (84 tonnes), Mali (66.2 tonnes) and Burkina Faso (57.7 tonnes).

It is important to point out that industrial gold declared at the production stage has not necessarily been produced in compliance with all legal standards. In a report published in 2023, SWISSAID drew up a list of serious problems, in particular human rights violations and environmental degradation, concerning the majority of the 125 industrial gold mines identified in Africa[19].

Lastly, it is possible that the production of a small amount of industrial or semi-industrial gold has not been declared. However, SWISSAID has not found sufficient information on this phenomenon and notes that, in many cases, semi-industrial gold production is likely to be included in the estimates of undeclared gold production.

FIGURE 2 – Industrial and semi-industrial gold production of all African countries

Kilograms

Sources: statistics of the African states, see appendix 2.

3.2 ARTISANAL AND SMALL-SCALE GOLD PRODUCTION

Gold production from artisanal and small-scale mining (ASM) is made up of reported and unreported production. Forty-one of the 54 African countries have an estimated ASM gold production of at least 100 kg per year[20] and 15 of these countries produce ASM gold, but do not report any production officially[21].

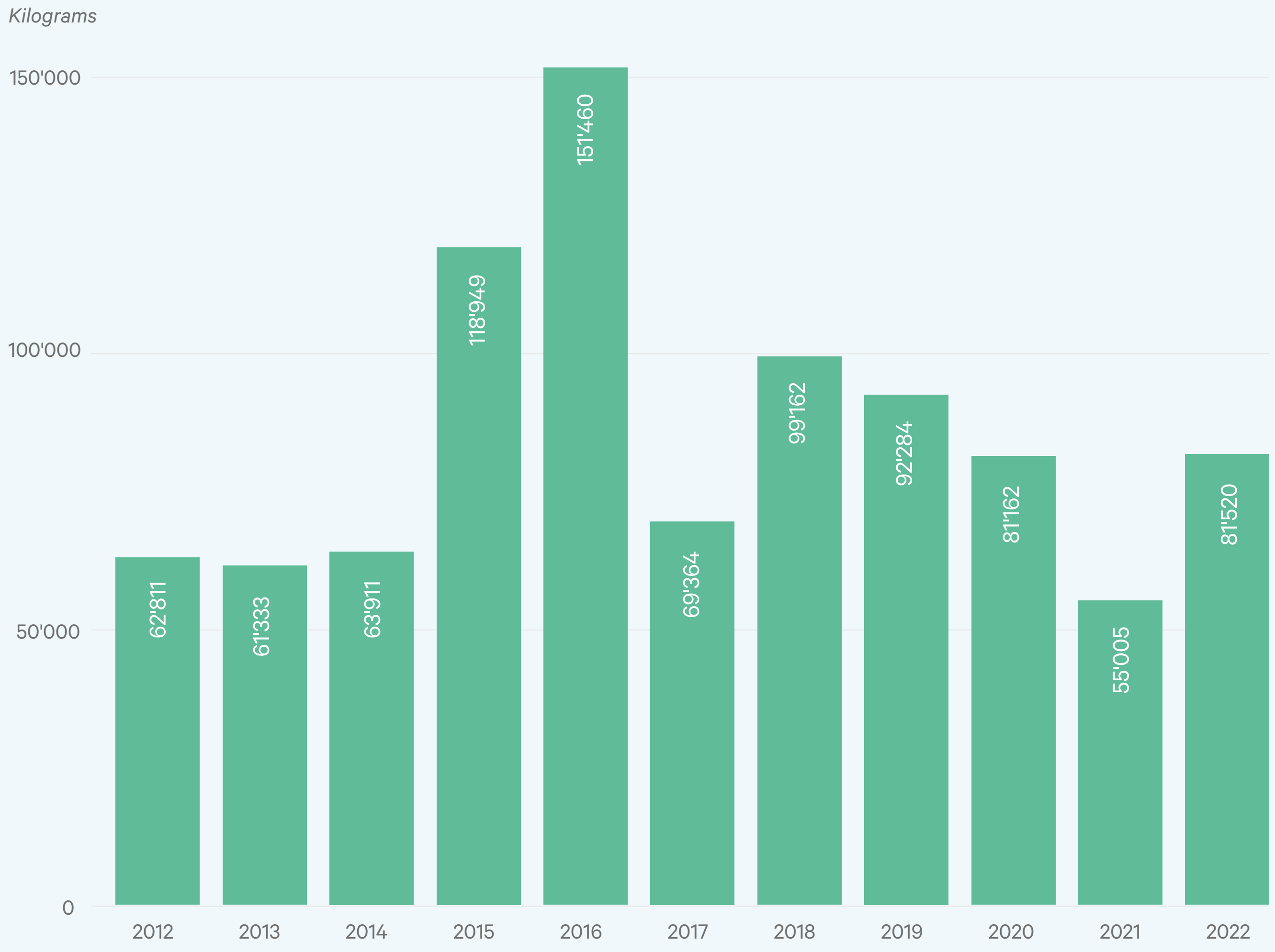
In its guidance, the OECD defines ASM as "formal or informal mining involving mainly simplified forms of exploration, extraction, processing and transport and manual labour, with limited mechanisation. They are generally low capital-intensive operations using labour-intensive technologies"[22].

ASM gold business in Africa has grown considerably over the last fifteen years. The increase in the price of gold from USD 30,000/kg in 2009 to more than USD 60,000/kg in 2024[23] has caused a veritable gold rush in many African countries.[24]

DECLARED ASM GOLD PRODUCTION

Statistics on ASM reported gold production in Africa over the period 2012–2022 show a sharp rise in the mid-2010s (see Figure 3). However, this does not correspond to the actual increase in quantities produced. As can be seen by disaggregating total production by country, this sharp increase is due to data on ASM gold production in Sudan, which is only available for the years 2015 and 2016 (see explanation below).

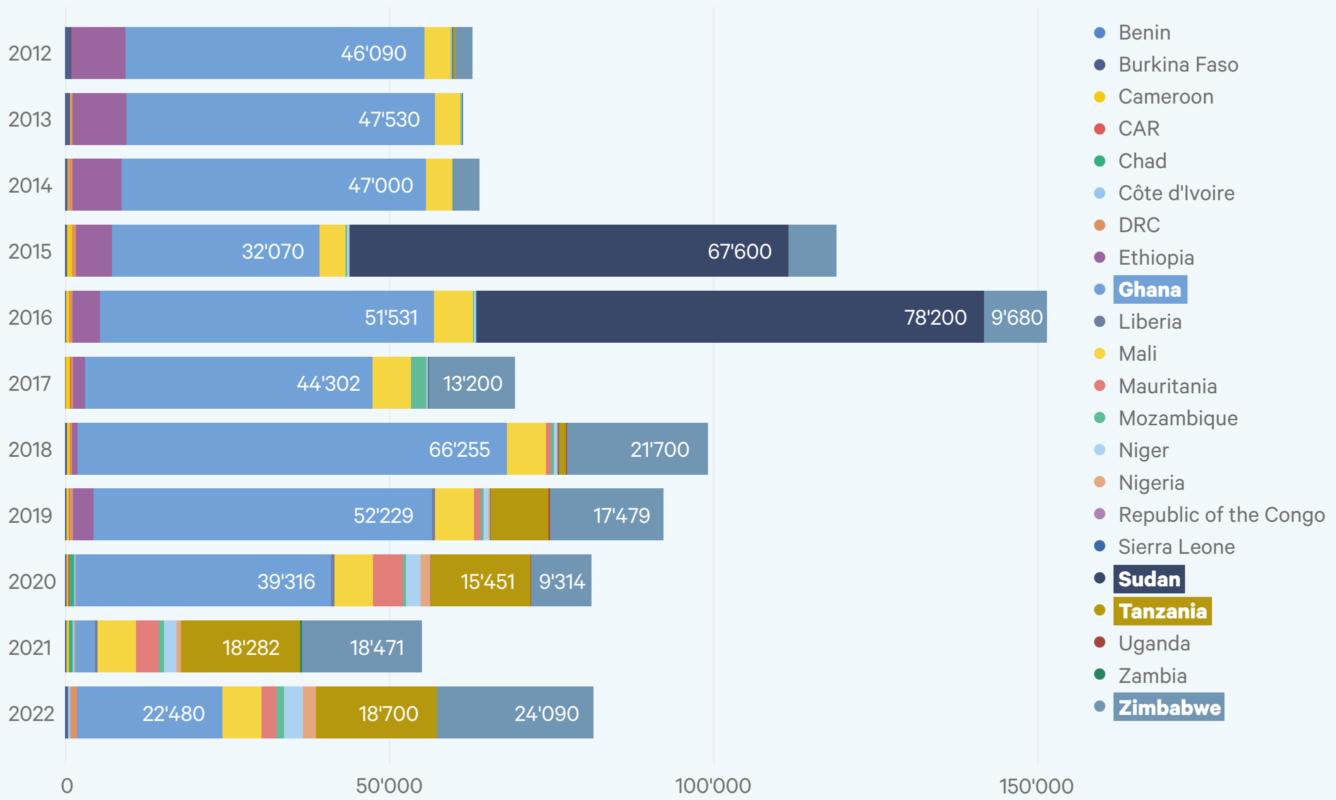
FIGURE 3 – Declared artisanal and small-scale gold production of all African countries



Sources: statistics of the African states, see appendix 3.

FIGURE 4 – Declared artisanal and small-scale gold production of all African countries

Kilograms



Sources: statistics of the African states, see appendix 3.

Reported ASM gold production has followed different trends in different countries (see Figure 4), due in particular to changes in the political (e.g. conflicts), economic (e.g. taxation regime, state monopoly or increased control over gold purchases) and health (e.g. COVID-19) contexts, or to changes in data collection methods. For example, it fluctuated sharply in Ghana, Ethiopia and Zimbabwe, while it increased in Tanzania and Niger, and remained stable in Mali.

Analysis of declared ASM gold production statistics requires considerable caution, for several reasons. Firstly, the countries that publish such statistics use different methods to collect them, some of which are questionable. SWISSAID has identified the following methods in particular:

- Taking the quantities of ASM gold exported and presenting them as quantities produced. This is what the Ghanaian authorities do, for example. This method has been criticised because it leaves out the ASM gold produced in the country but sold on the local market (not exported) and counts gold imported from other countries and re-exported as local production[25]. Some countries have data on the quantities of ASM gold exported, but do not publish any data on the production of this type of gold within their country. This is particularly the case in Guinea. This explains why this country does not appear in Figure 4, even though the Guinean authorities collect the same type of data as their Ghanaian counterparts.

- Making estimates and/or calculations. This is what the Malian government has done, estimating ASM annual gold production in Mali at 4 tonnes between 2011 and 2015 and 6 tonnes between 2016 and 2022. This method poses a problem, because not only is the use of estimates as official figures inaccurate, but in the case of Mali, the official estimates are far removed from reality[26].

- Using only the quantities of ASM gold purchased by a public agency, such as a central bank. This is what the authorities in Ethiopia, Mauritania and Zimbabwe are doing or have done[27].

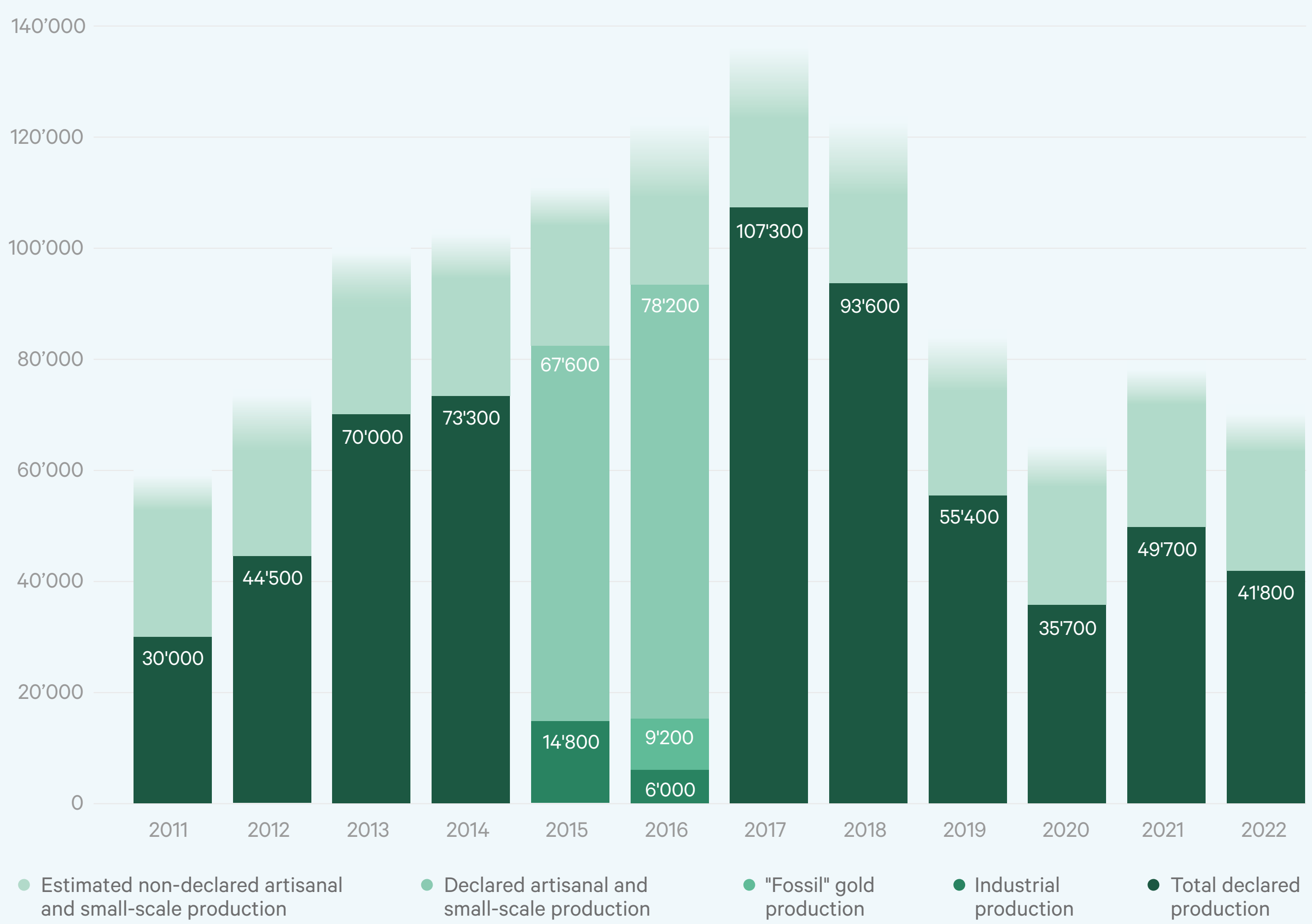
Secondly, some countries publish incomplete data on reported ASM gold production, for example, only for certain years. Ethiopia has only published data up to 2019, although the National Bank of Ethiopia, the country's central bank, has continued to purchase gold from ASM in subsequent years. The Sudanese state has only published data for 2015 and 2016, whereas ASM gold production in Sudan has been documented for all of 2010. The absence of Sudanese data for the years before 2015 and after 2016 considerably distorts the data on reported ASM gold production on the African continent as a whole. It might appear that total reported ASM gold production in Africa fell between 2016 and 2017, but it actually increased, as total gold production in Sudan in 2017 was higher than in 2016 and 85% of Sudan's total gold production comes from ASM[28].

Finally, some states have data on their country's total gold production, but do not disaggregate it by type of extraction, which is why this data cannot be taken into account in the "declared ASM gold" category (or, for that matter, in the "industrial or semi-industrial gold" category). Besides Sudan (2012–2014 and 2017–2022, see Figure 5), this concerns Algeria, Burundi, Gabon and Angola[29]. SWISSAID contacted state agencies in these countries to obtain disaggregated data, but did not receive it.

It is important to note that ASM gold whose production has been declared has not necessarily been produced in compliance with all legal standards. It may be linked to human rights violations or environmental degradation, or even to the financing of armed conflicts. The people who produced it may not have the necessary permits and authorisations or may not have paid the taxes to which they are subject. An OECD report on gold mining in Ghana and Liberia highlights that the line between legality and illegality is blurred. The report's author, Marcena Hunter of the Global Initiative against Transnational Organized Crime (GI-TOC), cites examples of licence holders mining in areas outside their allocated land, failing to renew their licences when they expire or violating environmental standards[30]. A report by GI-TOC and Estelle Levin Ltd also highlights the difference between "being formal" and "operating formally"[31].

FIGURE 5 – Total gold production in Sudan

Kilograms



Sources: Estimate: Higher Council for Environment and Natural Resources 2021.
Official figures: Central Bank of Sudan (until 2021) and Sudanese Mineral Resources Ltd (2022).

Doubts about the legality of declared ASM gold production are all the more justified when the official figures for this production are identical to those for exports, or when they come from public agencies with questionable procurement policies. For example, in Zimbabwe, the state-owned refinery Fidelity Gold Refinery (FGR) has a “no-questions-asked”[32] purchasing policy, which means that illegal gold can be refined by FGR.[33] Similarly, in Sudan, it has been established that the Central Bank of Sudan has purchased gold linked to conflicts[34].

UNDECLARED ASM GOLD PRODUCTION

Artisanal and small-scale gold mining in Africa is highly informal, which means in particular that a significant proportion of gold production in this sub-sector is not declared. There are many reasons for this (see p. 92).

Quantifying total undeclared ASM gold production in Africa is difficult due to the lack of information in this area. Available estimates come from research, reports and surveys of varying methodological quality. The authors of this study have assessed the methodologies employed and have relied on the opinions of experts and stakeholders to determine which estimates they could consider to be the most reliable. In the few cases where they found only one estimate, they had to include it in their analysis even if they had reservations about its reliability.

SWISSAID collected as many estimates of unreported ASM gold production as possible and additional information on the gold ASM subsector for all 41 African countries where such production is known to exist. For only 3 countries, namely Algeria, Benin and Malawi, SWISSAID has not found any estimates. When contacted by SWISSAID, the Beninese and Malawian authorities replied that there were no estimates for their countries[35]. The Algerian authorities refused to reply.

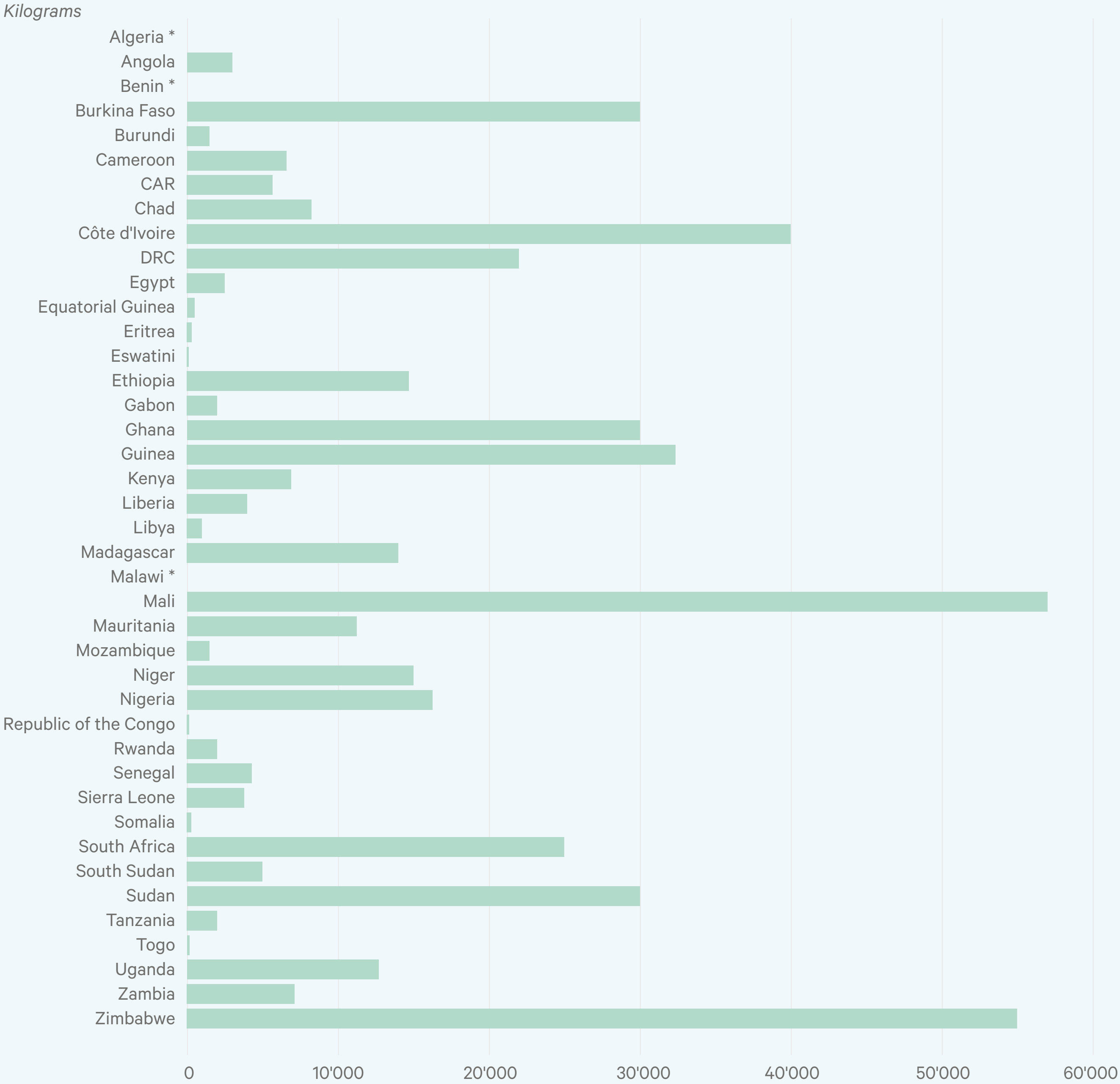
The estimates of undeclared ASM gold production that SWISSAID found were developed using a variety of methods. Some are based on calculations derived from mercury emissions into the atmosphere,[36] others on multiplying the number of artisanal miners by the average production per artisanal miner,[37] and still others on extrapolating the average quantity of gold produced at certain mining sites to all the sites in the country. [38] Attention should be paid to the geographical scope of each estimate. For example, some estimates for Mali do not take into account ASM gold production in the north of the country. Similarly, an estimate for Côte d’Ivoire omits certain gold-producing regions.[39]

Estimates of undeclared ASM gold production vary greatly from one African country to another (see Figure 6). For Mali and Zimbabwe, the estimate that SWISSAID considered as the most relevant is more than 50 tonnes, while for Togo, Somalia, the Republic of Congo and Eswatini, it is less than one tonne. **In nine African countries, the estimate of undeclared ASM gold production exceeds 20 tonnes per year.**

For some countries, there are several estimates of undeclared ASM gold production, some higher than others, and it is difficult to choose just one. SWISSAID has therefore opted for a range. For example, the range for Mali is 30–57 tonnes, and the range for Guinea is 16–32 tonnes. If we add up all the ranges for the 38 countries for which at least one estimate of undeclared ASM gold production was found, we see that **in Africa, between 321 and 474 tonnes of gold per year are not declared at the production stage** (see Figure 7). Most of the estimates used by SWISSAID date from the late 2010s or early 2020s. They are therefore relatively representative of the state of knowledge at the time of publication of this report. At the price of gold on 1 May 2024 (USD 73,862/kg at 2.15pm[40]), this range of estimates by weight corresponds to an **annual value of between USD 23.7 billion and USD 35 billion**.

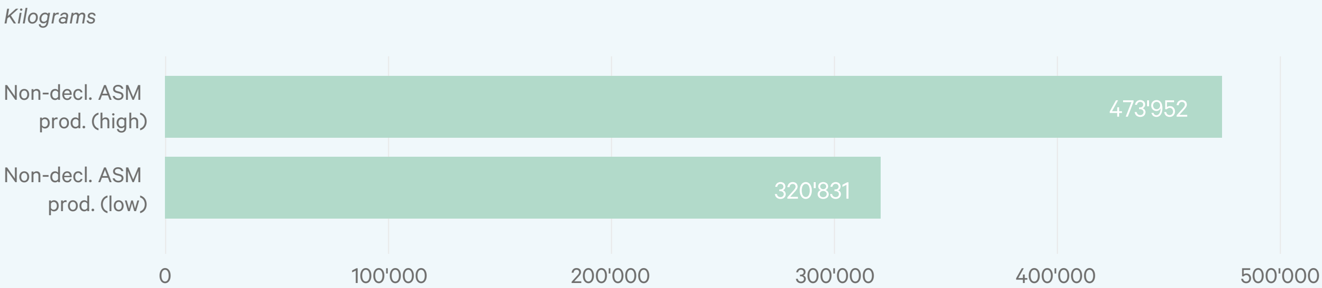
It is worrying to note the scale of gold extraction taking place outside the legal framework. African states have virtually no control over these flows and receive no revenue from them. The absence of state control also implies an increased risk of forced labour, child labour, damage to the health or even death of workers, environmental pollution and the financing of armed groups. At the same time, it is important to emphasise that, in many national contexts, the majority of artisanal miners are simply seeking to earn a living, have no choice but to work informally and have no criminal intent.

FIGURE 6 – Non-declared artisanal and small-scale gold production of all African countries (high estimates)



Sources: see appendix 4. SWISSAID has used the most recent and/or most realistic estimates. Countries that do not appear in this graph have little or no ASM gold production. Countries marked with an asterisk have proven ASM gold production, but for which SWISSAID has not found any estimates.

FIGURE 7 – Non-declared artisanal and small-scale gold production of all African countries (high and low estimates)



Sources: see appendix 4. SWISSAID has used the most recent and/or most realistic estimates and has calculated two totals: one with the higher estimates and the other with the lower ones.

The PAMA artisanal mining site in the village of Tindangou, Burkina Faso.

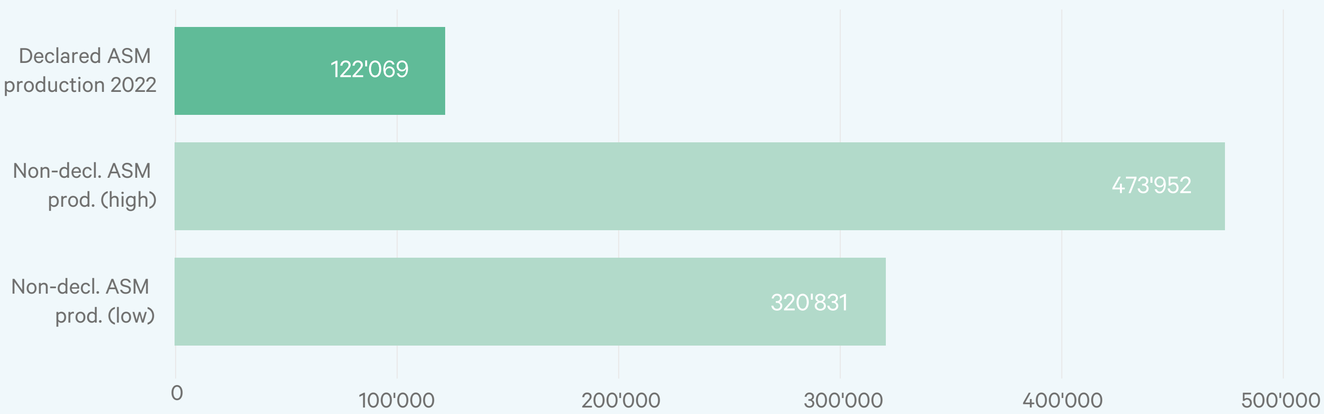
TOTAL ASM GOLD PRODUCTION

Adding together the figures for declared and undeclared ASM gold production in African countries in 2022 (see Figure 8) gives **a total ASM gold production of between 443 and 596 tonnes**. This calculation takes into account Sudan's undeclared ASM gold production, which some experts estimate at 85% of the country's total declared gold production.[41] By way of comparison, the research consultancy Metal Focus estimated ASM gold production on the African continent at 480 tonnes in 2022.[42]

The declared portion of ASM gold production on the African continent represents only 20.5% to 27.6% of the total. In other words, **between 72.4% and 79.5% of the ASM gold produced in Africa is not declared at the production stage.**

FIGURE 8 – Declared versus non-declared (estimated) artisanal and small-scale gold production of all African countries

Kilograms

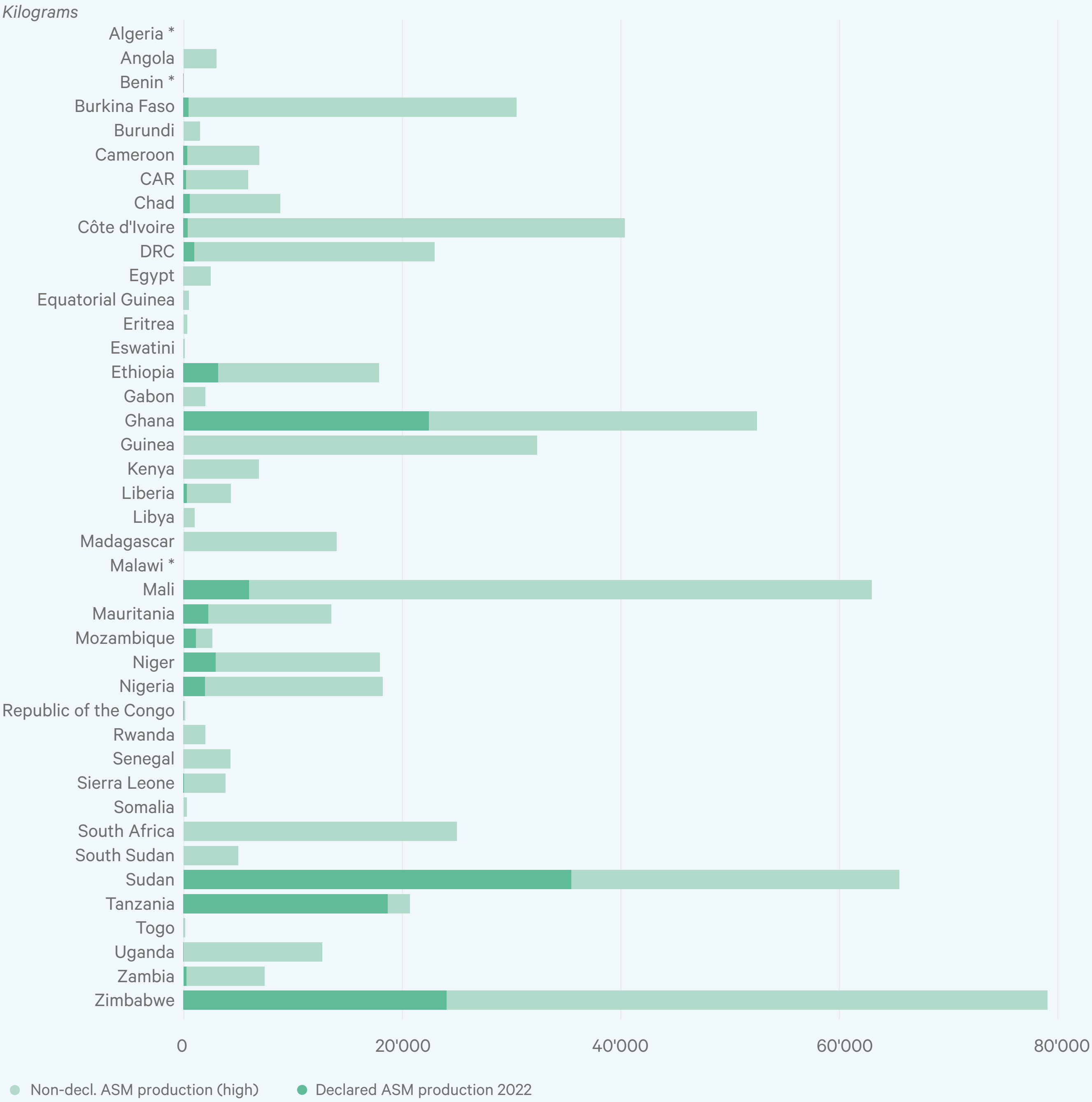


Sources: Declared production: statistics of the African states for the year 2022, with some exceptions, see appendix 3. Non-declared production (estimates): see appendix 4. SWISSAID has calculated two totals: one with the higher estimates and the other with the lower ones.

One can identify several categories of countries thanks to Figure 9. The first category includes countries for which no figures are available on declared ASM gold production, in other words, where the sector of artisanal and small-scale gold mining is completely outside state control. Fourteen countries, including South Africa, Madagascar, South Sudan and Zambia, fall into this category. The second category includes countries where more than 95% of ASM gold production is outside state control. These include Burkina Faso, Côte d'Ivoire and the Central African Republic (CAR). Finally, the third category includes countries where more than half of ASM gold production is declared. This category contains only two countries, namely Tanzania and Sudan (although there are doubts about Sudan's data collection methodology). Tanzania is the African country where state authorities record the highest percentage of ASM gold production.

Of the 38 countries for which at least one estimate of ASM gold production is available, 33 have undeclared ASM gold production which represents more than three quarters of their total ASM gold production.

FIGURE 9 – Declared versus non-declared (estimated) artisanal and small-scale gold production of all African countries



Sources: Declared production: statistics of the African states for the year 2022, with some exceptions, see appendix 3. Non-declared production (estimates): see appendix 4. Countries not shown in this graph have little or no ASM gold production. Countries marked with an asterisk have proven nondeclared artisanal and small-scale gold production, but for which SWISSAID has not found any estimates.

3.3 TOTAL GOLD PRODUCTION

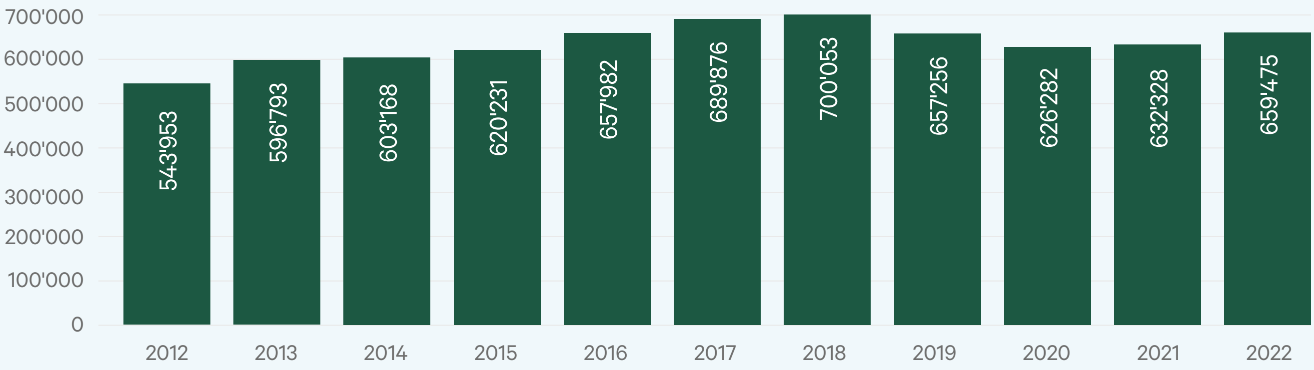
DECLARED TOTAL GOLD PRODUCTION

Total declared gold production in Africa includes industrial gold production and declared ASM gold production. It increased from 2012 to 2018, when it reached around 700 tonnes, then fluctuated until 2022 (see Figure 10).

In 2022, the largest producers of declared gold in Africa were Ghana, Mali and South Africa (see Figure 11). Between 2018 and 2022, declared gold production fell sharply in Ghana, South Africa and Sudan, while it rose sharply in Burkina Faso, Côte d'Ivoire and Mali.

FIGURE 10 – Declared total gold production of all African countries

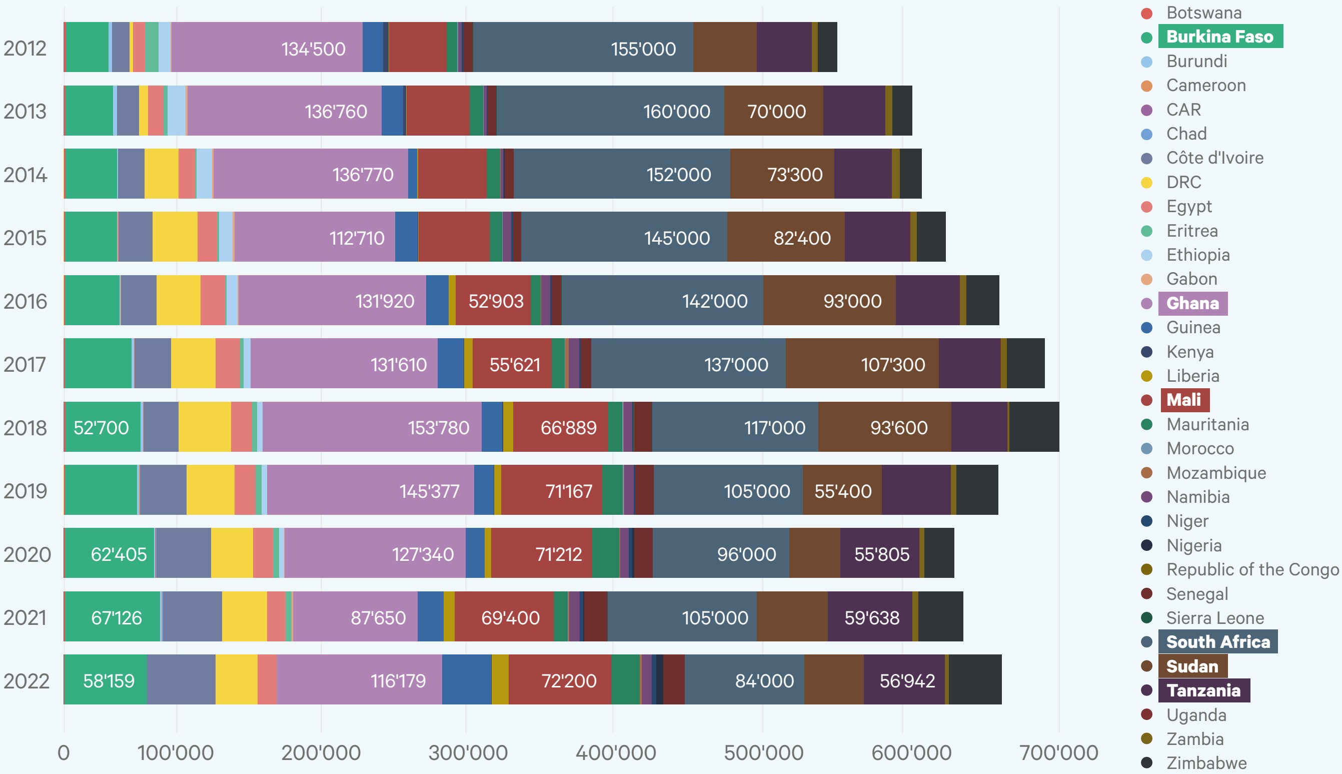
Kilograms



Sources: statistics of the African states, see appendix 1.

FIGURE 11 – Declared total gold production of all African countries

Kilograms



Sources: statistics of the African states, see appendix 1.

An AngloGold Ashanti employee in front of the Geita industrial gold mine in Tanzania.

DECLARED AND UNDECLARED TOTAL GOLD PRODUCTION

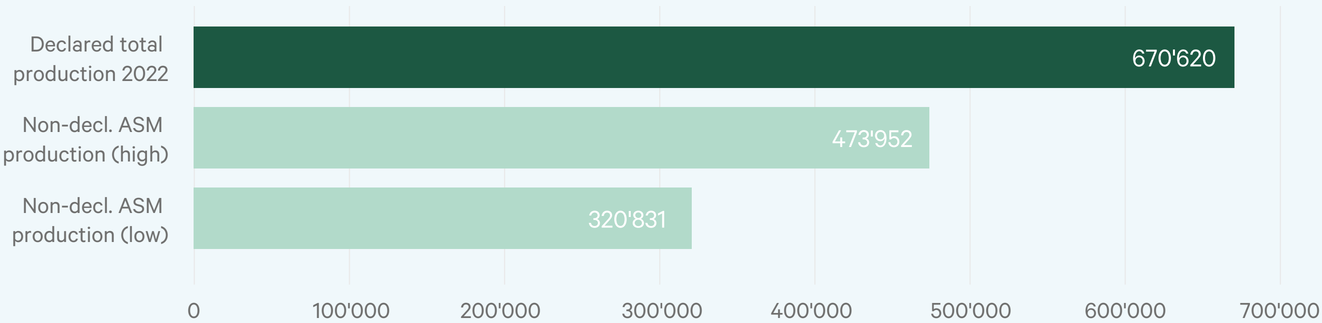
Adding together total declared gold production and estimates of undeclared ASM gold production (see Figures 12 and 13) gives **total gold production for the African continent of between 991.4 and 1,144.6 tonnes in 2022.** At the price of gold on 1 May 2024 (USD 73,862/kg at 2.15pm[43]), **this represents a commercial value of between USD 73.2 billion and USD 84.5 billion.** By comparison, the consultancy Metal Focus has estimated total gold production in Africa at 979 tonnes in 2022.[44]

According to Metal Focus, global production of mined gold was 3,627.7 tonnes in 2022.[45] Thus, gold production in Africa accounts for between a quarter and a third of global gold production in 2022.

A comparison of the data reveals that **between 32% and 41% of the total gold produced in Africa was not declared at the production stage in 2022**.

FIGURE 12 – Declared versus non-declared (estimated) total gold production of all African countries

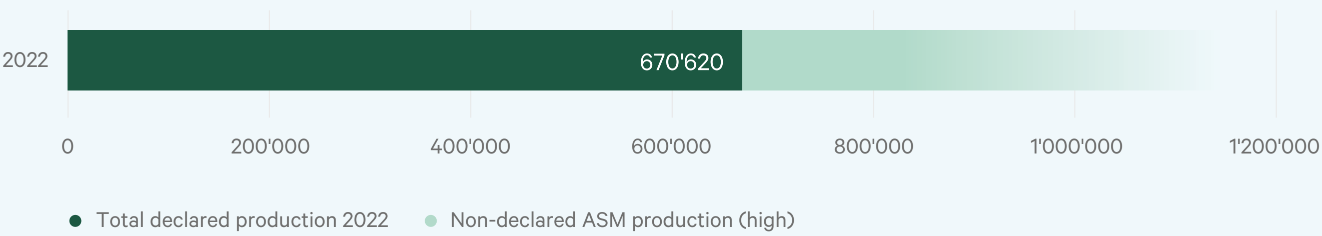
Kilograms



Sources: Declared production: statistics of the African states for the year 2022, with some exceptions, see appendix 1.
Undeclared production (estimates): see appendix 4. SWISSAID has calculated two totals: one with the higher estimates and the other with the lower ones.

FIGURE 13 – Declared versus non-declared (estimated) total gold production of all African countries

Kilograms

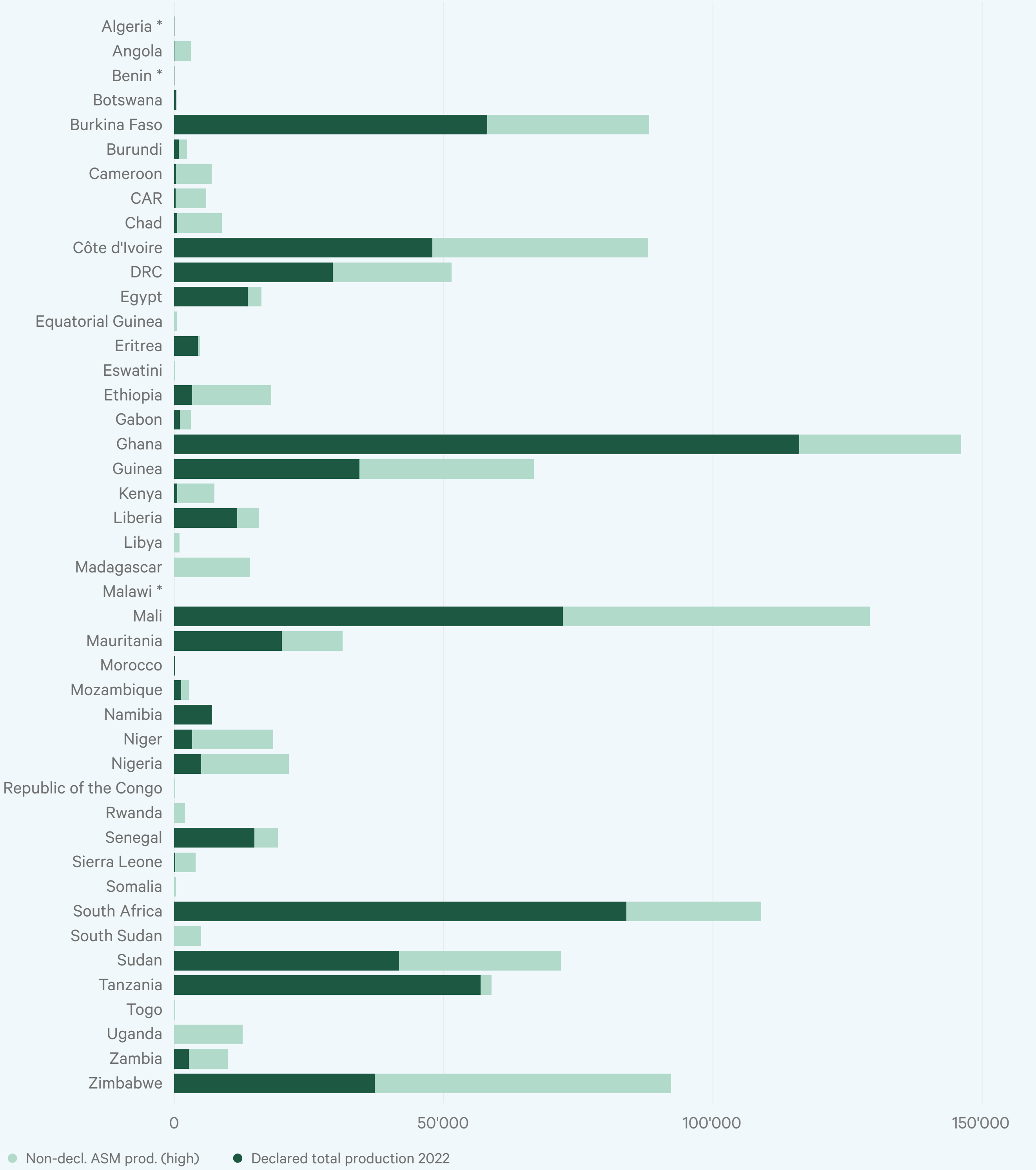


Sources: Declared production: statistics of the African states for the year 2022, with some exceptions, see appendix 1.
Undeclared production (estimates): see appendix 4.

Figures 14 and 15 show that Ghana was Africa's largest gold producer in 2022, followed by Mali and South Africa. Ten countries produced more than 50 tonnes of gold that year. And in more than 15 countries, undeclared ASM gold production exceeded total declared gold production.

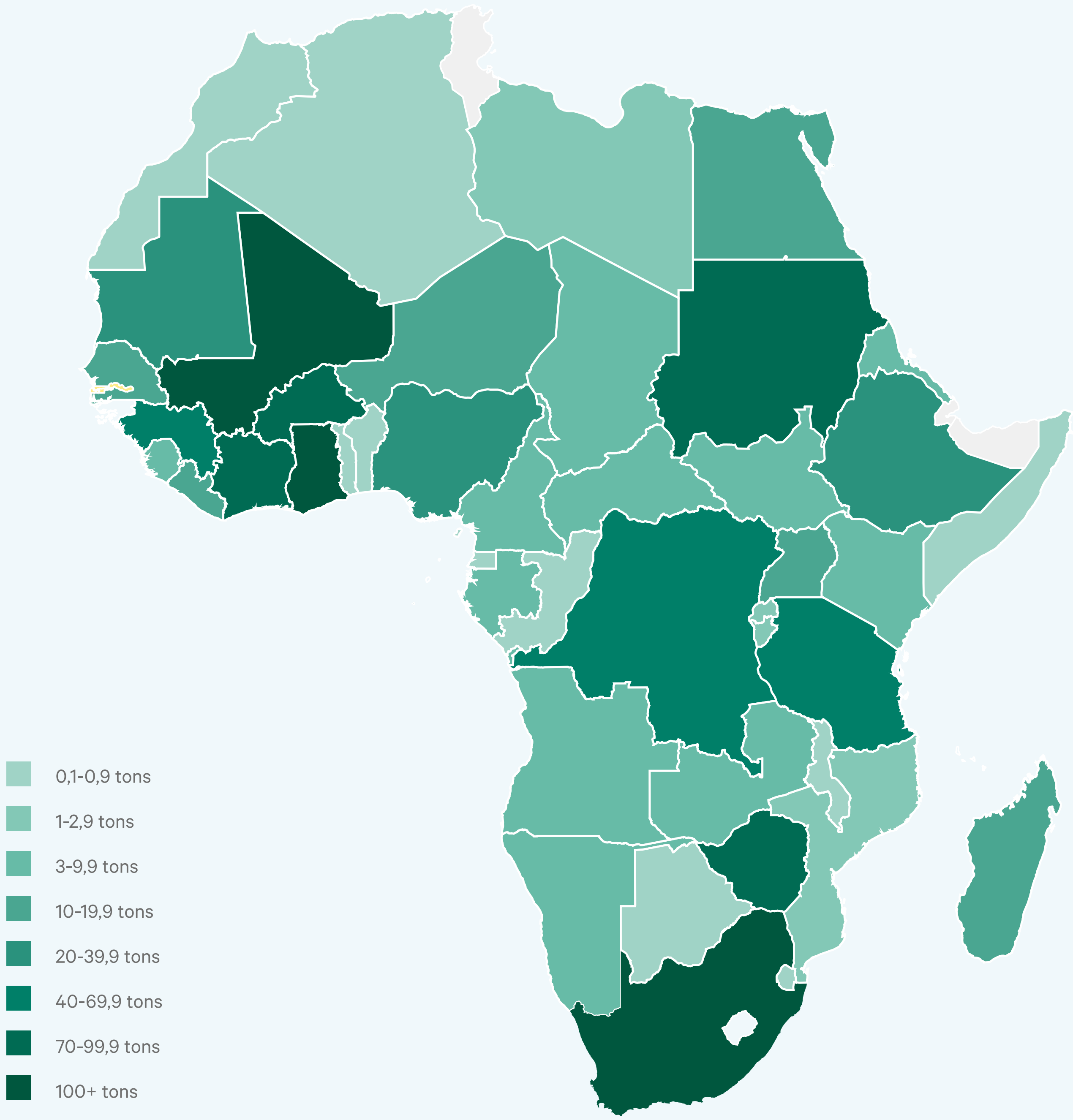
FIGURE 14 – Declared versus non-declared (estimated) total gold production of all African countries

Kilograms



Sources: Declared production: statistics of the African states for the year 2022, with some exceptions, see appendix 1. Non-declared production (estimates): see appendix 4. Countries not shown in this graph have little or no gold production. Countries marked with an asterisk have proven non-declared artisanal and small-scale gold production, but for which SWISSAID has not found any estimates.

FIGURE 15 – Total (declared and non-declared) gold production of African countries in 2022*



* In some cases, data for 2022 was not available, so SWISSAID used data for 2021 or earlier.

Sources: see appendix 1 and appendix 4.

Africa's ASM gold production is greater than its industrial gold production if the high end of the range of estimates of undeclared ASM gold production calculated by SWISSAID is used as a reference. In other words, **more than half of Africa's gold comes from ASM**. This demonstrates the considerable scale of this sector on a continental scale. On a national scale, ASM gold production also exceeds industrial gold production in several African countries, including Niger, Sudan, Nigeria and Zimbabwe.

4 TRADE

After extraction in Africa, gold takes various routes: it is either refined then consumed or stored in the country of production or exported legally to an African or non-African country or smuggled to an African or non-African country.

Gold consumed locally or stored in the country of production represents an extremely small proportion of the total gold mined each year in Africa. The jewellery and banking sectors in African countries consume and use little local gold. Many African central banks have acquired local gold through official purchasing programmes (see p. 93), but this gold is generally exported to non-African countries, where it is refined then stored or sold. A comparison of production, exports and imports into partner countries shows that the vast majority of African gold leaves the country where it was produced.

The main destination of **declared gold exports from one African country to another** is South Africa. For the rest, declared intra-African gold trade remains very low (see p. 30). Several African states have reported imports of gold from other African countries, but this gold is very rarely declared for export in the country of production and therefore cannot be considered as legal gold (see p. 78). The main destinations for declared gold exports from African countries to non-African countries are the UAE, Switzerland and India.

Finally, **the gold that is smuggled out of African producing countries heads for either a non-African country**, in which case it almost always travels by air and generally lands in the UAE (see p. 38), **or another African country**, in which case it generally travels by land and transits through a neighbouring country before reaching a non-African country, again usually the UAE.

Methodology

Comparing declared exports of gold from African countries with declared imports of gold into partner countries presents two major difficulties. Firstly, the figures reported by countries importing gold from South Africa are artificially high (see p. 32) and must therefore be corrected. Secondly, it is necessary to determine how to take account of declared intra-African gold trade, in particular how to compensate for the opacity of statistics on South African gold trade (see p. 30).

There are several ways of comparing gold exports reported by African countries with gold imports reported by partner countries, for example by taking into account trade in declared intra-African gold or by taking into account only gold leaving the African continent. The first possibility involves comparing the total gold exports of African countries with the imports of all partner countries, including African countries. But this comparison is difficult, because South Africa, one of the main hubs for gold mined in Africa, only publishes statistics for a small proportion of its imports (see p. 82). The second possibility involves comparing exports of gold from African countries to non-African countries with imports of gold from Africa into non-African countries. This comparison is also difficult, as South Africa only reports part of its exports (see p. 82). To overcome these obstacles, SWISSAID opted for a hybrid method consisting of comparing total gold exports from all African countries, including to other African countries, with gold imports from African countries into non-African countries. This proved to be the most accurate method, for several reasons. The first is that African gold exports declared to another African country are almost exclusively destined for South Africa (see p. 30). The second is that almost all gold imported into South Africa from African countries is not stored or consumed in that country but refined then exported to non-African countries (see p. 35), where it is declared on import as coming from South Africa. Finally, the third reason is that, due to the application of the strict special system for trade statistics in South Africa, gold transiting through this country does not appear in its official export statistics; it is therefore only recorded as exported once, namely in the country of origin.

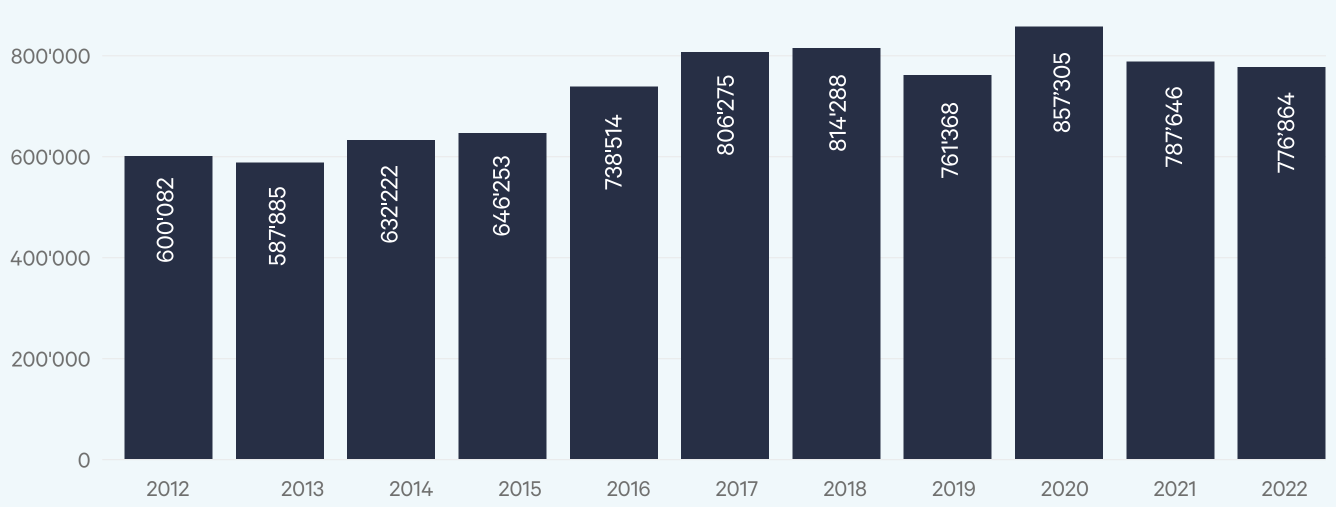
4.1 DECLARED GOLD EXPORTS FROM ALL AFRICAN COUNTRIES

Total gold exports reported by African countries increased over the period 2012–2022 (see Figure 16). They rose from 600 tonnes in 2012 to 814 tonnes in 2018, then fluctuated between 2019 and 2022.

Ghana, South Africa and Guinea were the main African exporting countries for declared gold in 2022 (see Figure 17). However, the data for South Africa is not representative, as this country's gold export statistics only cover gold mined on its territory; gold imported from other countries, refined in South Africa then re-exported is not included (see p. 32). SWISSAID estimates that South Africa exported around 230 tonnes of gold in 2022.[46]

FIGURE 16 – Declared exports of gold from all African countries

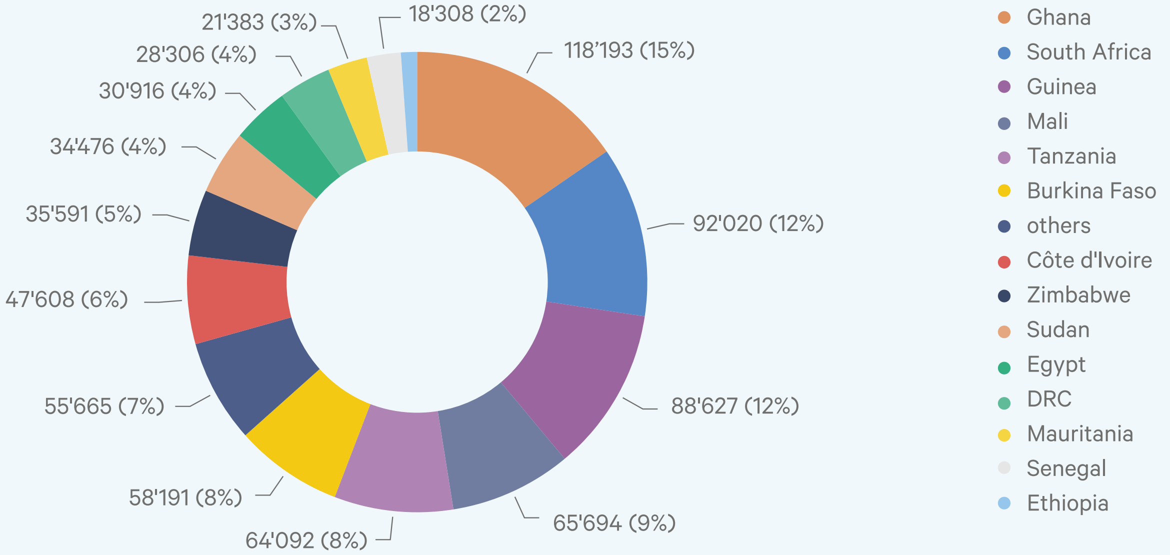
Kilograms



Sources: statistics of the African states, see appendix 5.

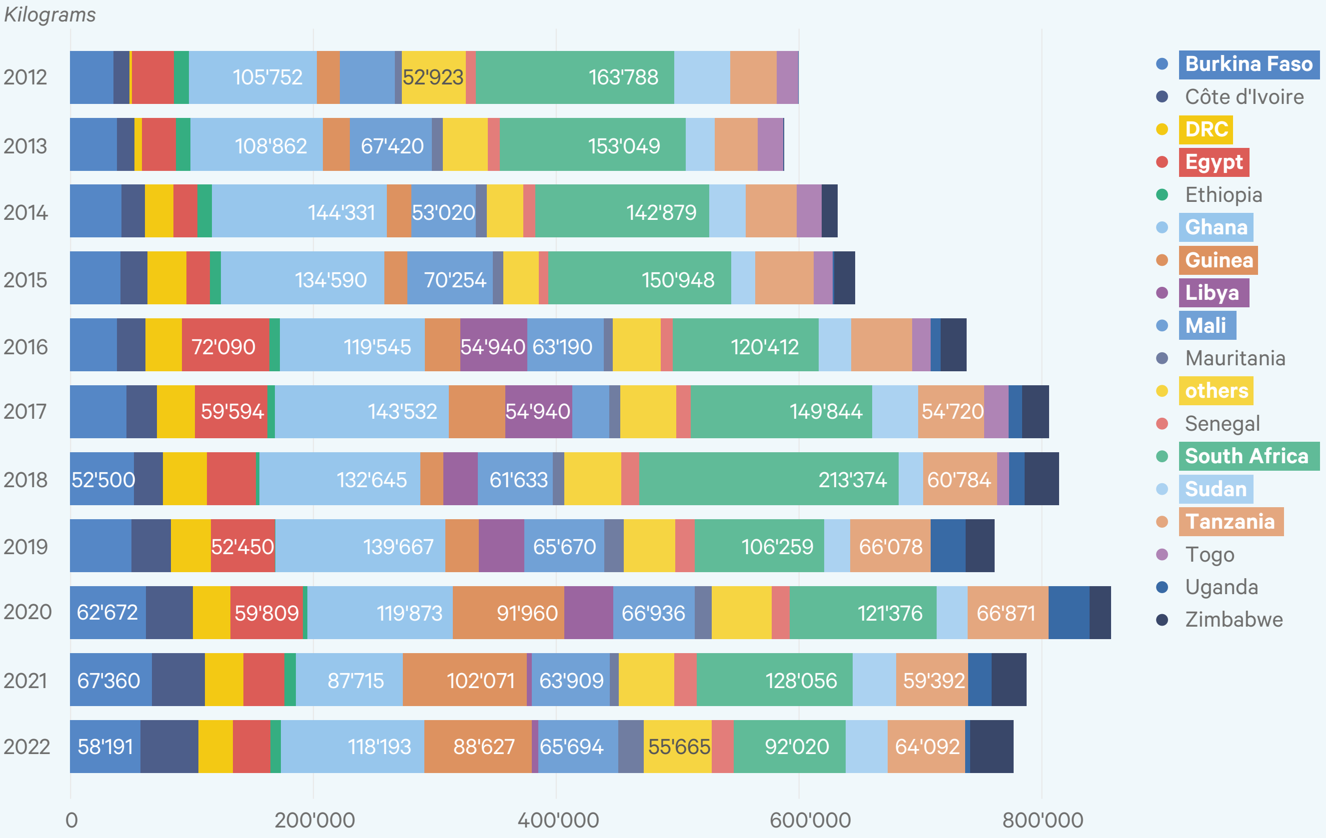
FIGURE 17 – Declared exports of gold from all african countries in 2022

Kilograms



Sources: statistics of the African states, see appendix 5.

FIGURE 18 – Declared exports of gold from all African countries



Sources: statistics of the African states, see appendix 5.

Analysis of African gold export data disaggregated by country (see Figure 18) leads to several observations. Firstly, gold exports from Ghana and South Africa were very high throughout the 2012–2022 period. Secondly, gold exports from Guinea have increased massively within two years, from 27.7 tonnes in 2019 to 91.96 tonnes in 2020, primarily due to gold exports from ASM. Thirdly, gold exports from several countries have fluctuated sharply: Egypt's peaked in 2016, as did South Africa's in 2018, while Ghana's fell in 2021. There are several reasons for these fluctuations. In the case of Ghana, for example, a 3% export tax introduced in May 2021 is behind the significant drop in exports in 2021 (this tax was reduced to 1.5% in January 2022).[47] Finally, some countries have only reported high exports for a few years, e.g. Libya between 2016 and 2019.

Part of the 777 tonnes of gold declared for export in African countries in 2022 was not declared at the production stage or crossed a border illegally before being declared. Similarly, some gold exports are the result of false declarations or are tainted by under-declaration. These phenomena are analysed in chapter 5 (see p. 69).

A truck transporting ore in the Geita industrial gold mine in Tanzania.

DECLARED INTRA-AFRICAN TRADE IN GOLD

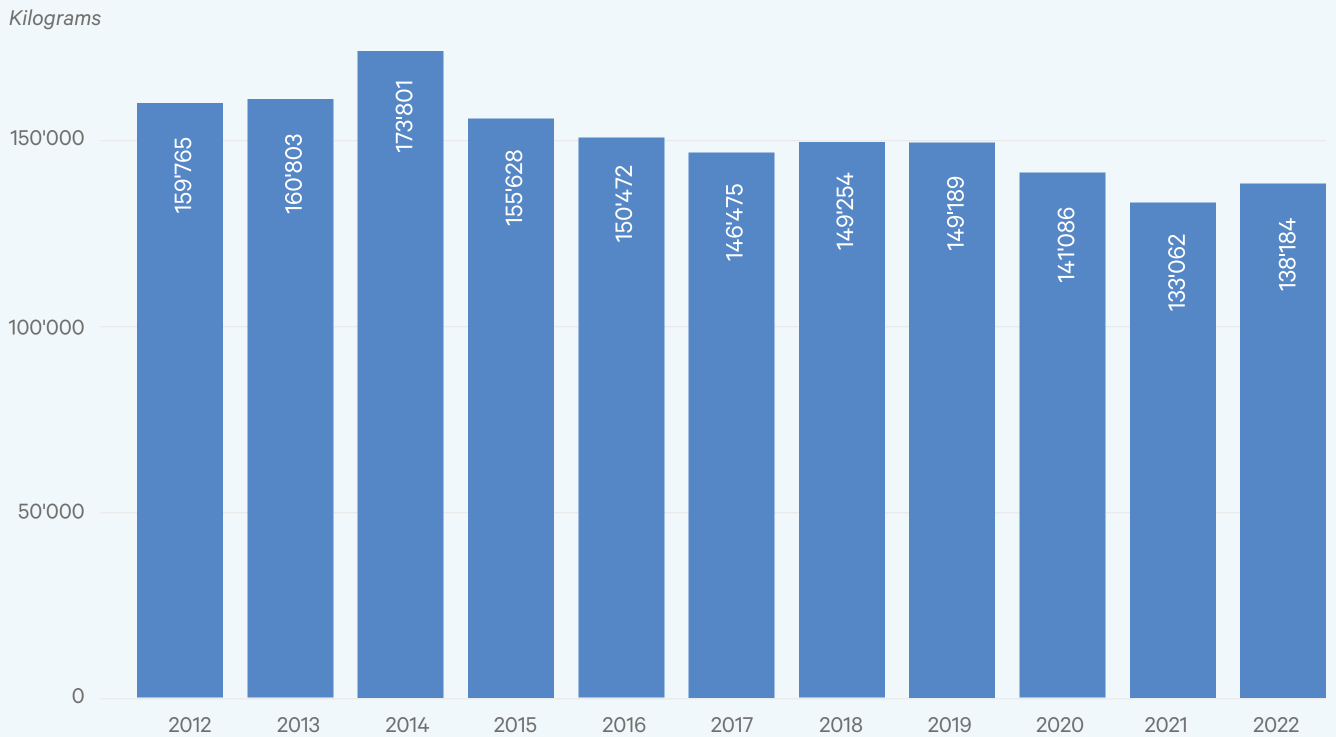
As mentioned above, declared gold exports from African countries to other African countries mainly concern the gold trade with South Africa. For the rest, SWISSAID calculated that this type of export did not exceed 15 tonnes in total in 2022, including 2,955 kg exported from Burkina Faso to Mali[48] and 2,000 kg from Sudan to Egypt.[49]

The vast majority of gold exports from African countries to South Africa consist of industrial gold sent to Rand Refinery, a refinery based near Johannesburg that is the only one in Africa to be certified by the LBMA. Rand Refinery has provided SWISSAID with the quantities of gold it has refined in recent years (in some years, these figures are also included in its annual reports): 302 tonnes (with an average purity of 82%) in the fiscal year (September-August) 2017/2018, 298 tonnes (74%) in 2018/2019, 272 tonnes (80%) in 2019/2020, and 296 tonnes (75%) in 2020/2021.[50] The refinery explained that half of the gold it processes generally comes from South Africa and the other half from other countries, the vast majority of which are African. Although it is impossible to make an accurate comparison, since the refinery's reports are based on a fiscal year while most other data is based on the calendar year, it is fairly clear that the 133 to 149 tonnes of gold exported annually from African countries to South Africa between 2017 and 2021 (see Figure 19) corresponds to around half of the gold processed by Rand Refinery. Moreover, the African countries that reported gold exports to South Africa correspond exactly to the countries that the refinery has confirmed sourcing from in recent years. And the business relationships between African industrial gold mines and Rand Refinery documented by SWISSAID in a study published in 2023[51] also confirm the identity of these countries.

It is impossible to compare statistics on gold exports from African countries to South Africa with statistics on gold imports into South Africa, because the South African authorities only report a small proportion of the country's gold imports (see p. 82).

Of the 777 tonnes of gold declared for export in African countries in 2022, around 153 tonnes was exported to another African country, while 624 tonnes was exported directly to a non-African country. **Intra-African trade thus represents only about 20% of the volume of gold declared for export in African countries.**

FIGURE 19 – Declared exports of gold from all African countries to South Africa



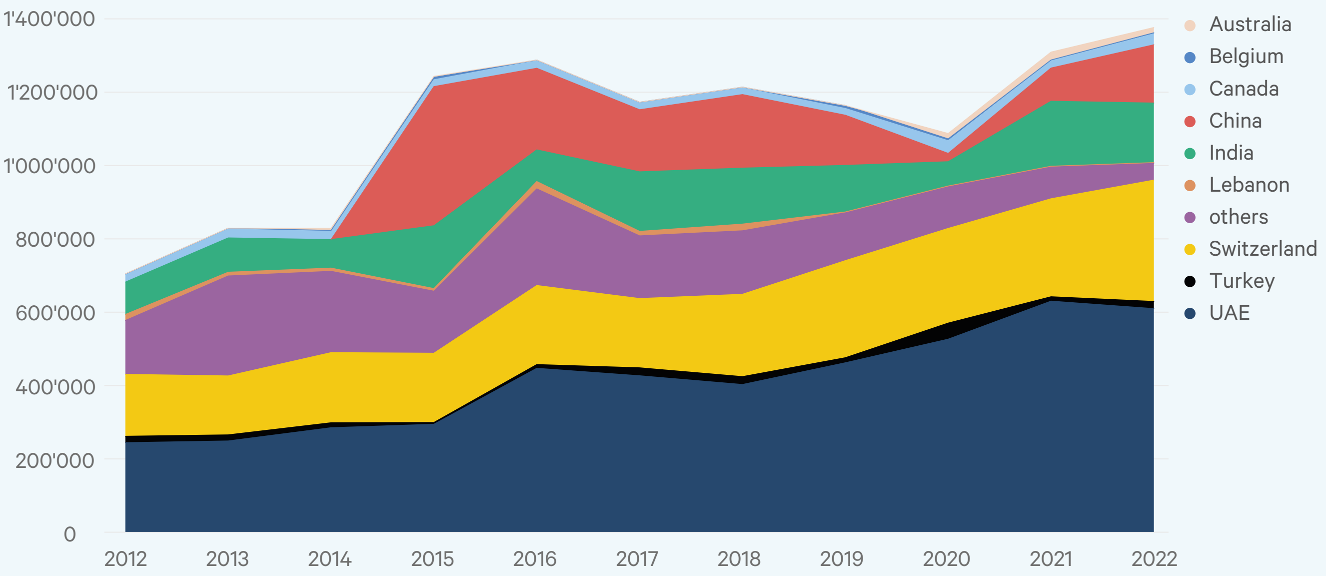
Sources: statistics of the African states, see appendix 6.

4.2 IMPORTS OF GOLD FROM AFRICA INTO NON-AFRICAN COUNTRIES

The vast majority of African gold is shipped to a few countries. Between 2012 and 2022, the UAE, Switzerland and India were the top three countries importing gold from Africa (see Figures 20 and 21). In 2022, these countries were responsible for 80% of African gold imports abroad. In 2022, according to official figures, almost half of this gold was imported into the UAE. China and the "other countries" category also appear to be major importers at first glance. However, a detailed analysis of non-African countries' import statistics shows that this is misleading (see p. 32). Thus, the proportion of African gold going to the UAE is likely to be even higher in reality than the official figures indicate.

FIGURE 20 – Imports of gold from Africa into all non-African countries

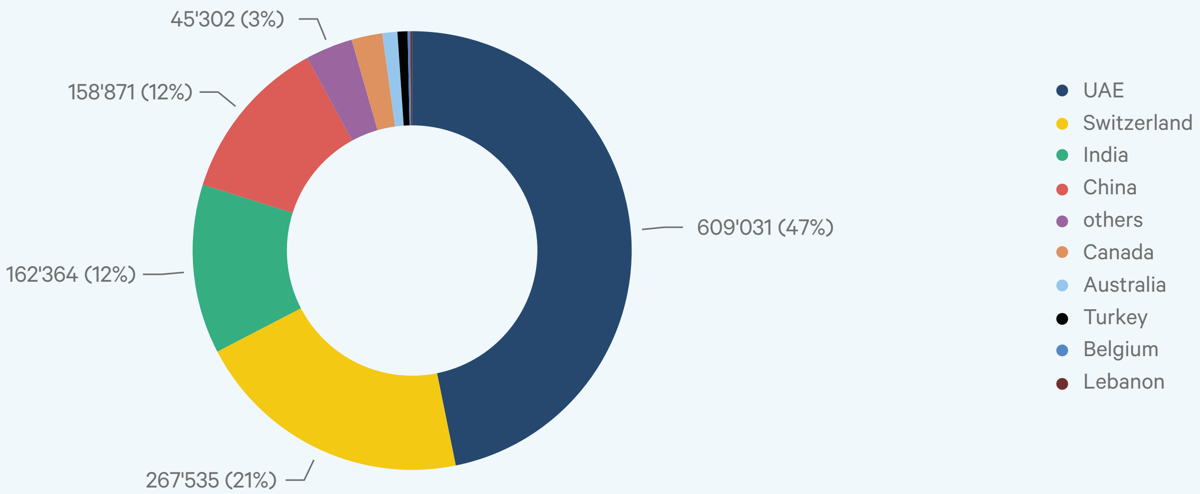
Kilograms



Sources: UN Comtrade HS 7108, data reported by countries of destination.

FIGURE 21 – Imports of gold from Africa into all non-African countries in 2022

Kilograms



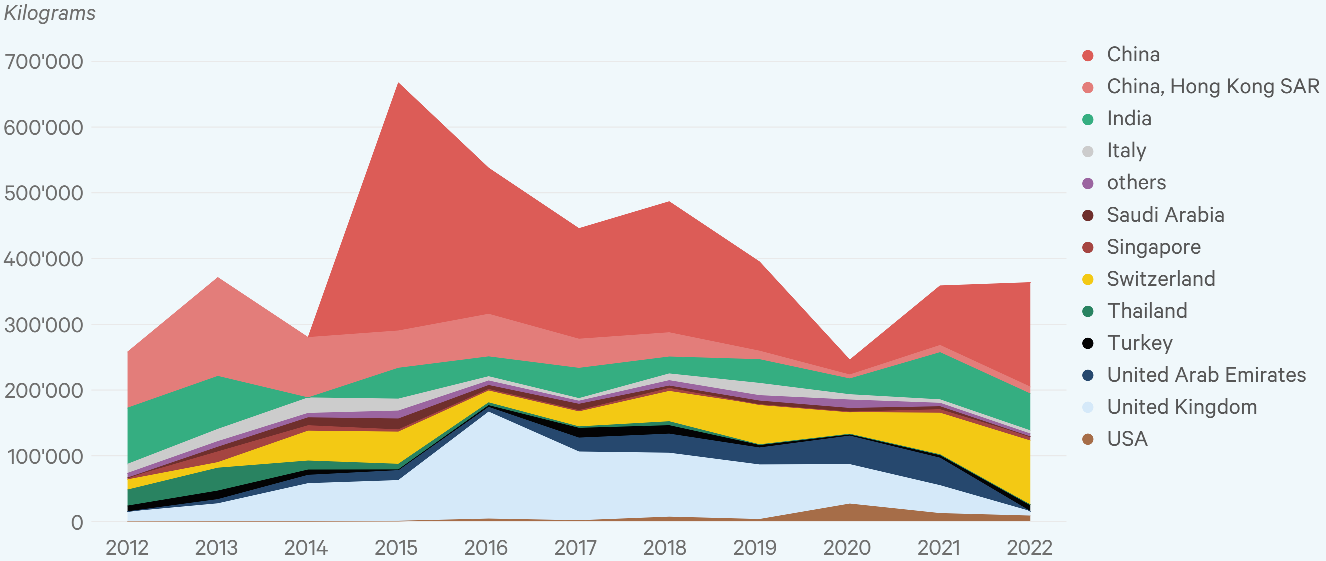
Sources: UN Comtrade HS 7108, data reported by countries of destination.

A SPECIAL CASE: IMPORTS OF GOLD FROM SOUTH AFRICA

The quantities of gold from South Africa imported into all other countries have systematically exceeded 200 tonnes per year between 2012 and 2022 (see Figure 22). In 2015, they even peaked at over 650 tonnes. Over this period, China was clearly the main importer of gold declared as coming from South Africa.

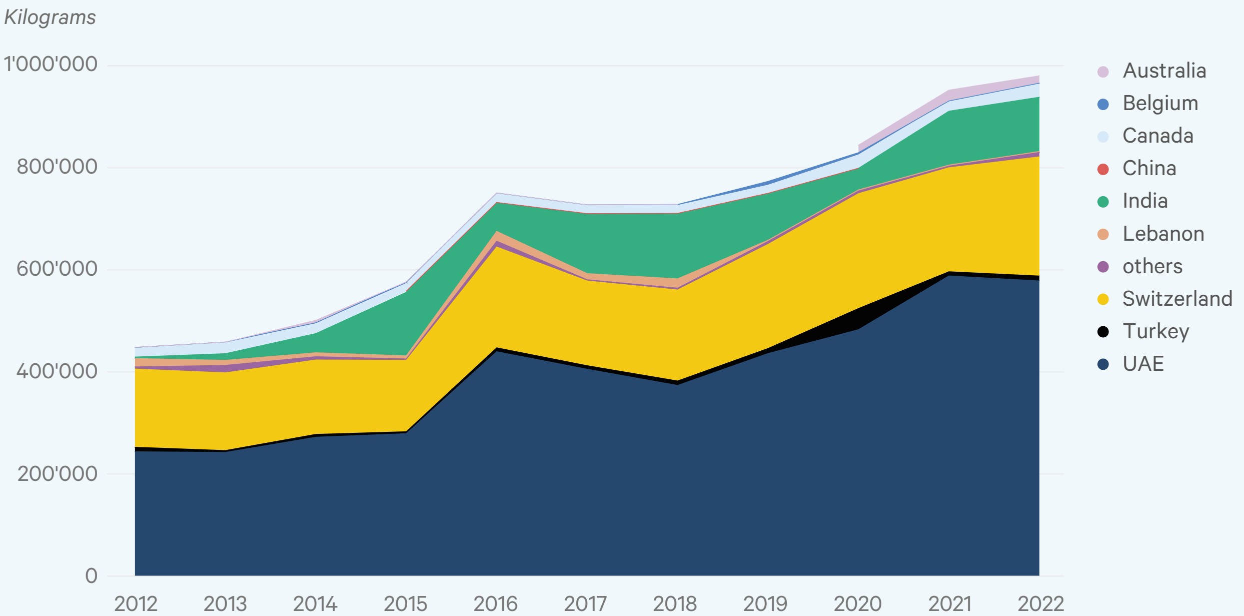
Imports of gold from Africa into all non-African countries vary considerably depending on whether South Africa is included. The comparison between Figure 20 and Figure 23 shows that in some years (e.g. 2015), half of the African gold imported into non-African countries was reported as coming from South Africa. It also shows that almost all African gold imported into China and "other countries" comes from South Africa.

FIGURE 22 – Imports of gold from South Africa into all other countries



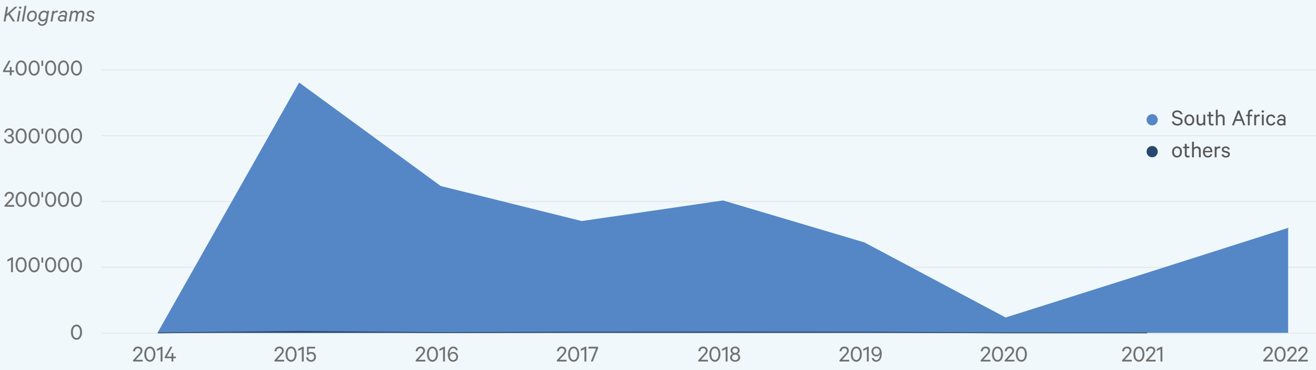
Sources: UN Comtrade HS 7108, data reported by countries of destination..

FIGURE 23 – Imports of gold from Africa excluding South Africa into non African countries



Sources: UN Comtrade HS 7108, data reported by countries of destination.

FIGURE 24 – Imports of gold from Africa into China



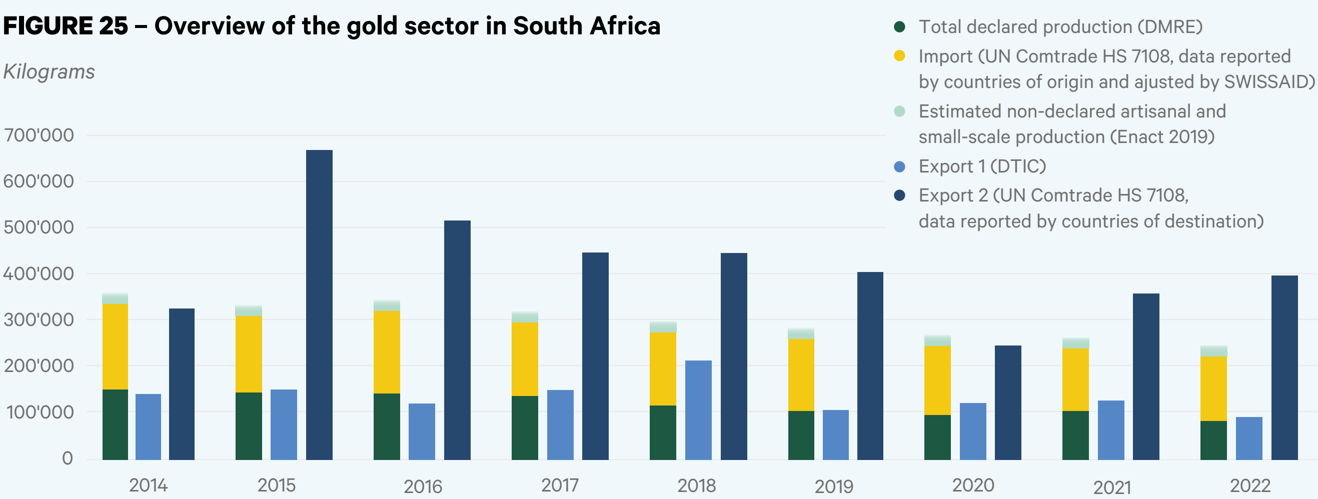
Sources: UN Comtrade HS 7108, data reported by China.

Analysis of Chinese customs statistics confirms that almost all gold imported into China from Africa between 2014 and 2022 was declared as originating from South Africa (see Figure 24).

Why are imports of gold from South Africa into non-African countries so high? To answer this question, we need to look closely at the South African gold sector (see Figure 25). In almost every year between 2014 and 2022, imports of gold from South Africa into non-African countries (termed "Export 2" in Figure 25, right-hand columns, dark blue) were higher, if not significantly higher, than the aggregate of: total declared gold production in South Africa, imports of gold into South Africa and undeclared ASM gold production in South Africa (left-hand columns, dark green, yellow and light green). The differences can be explained in part by the fact that smuggled gold from neighbouring countries (e.g. Zimbabwe) passes through South Africa. But this phenomenon is not of sufficient magnitude to explain the largest discrepancies, such as the one seen in 2015. So there is another explanation.

By analysing in detail the statistics on imports of gold from South Africa into non-African countries, SWISSAID has discovered that most of this gold does not come directly from South Africa. The example of China is particularly telling. In a 2019 article, Reuters news agency claimed that in 2015, China imported more gold from African countries than the UAE.[52] That year, the Chinese authorities did report 377 tonnes of gold imports from South Africa, but detailed analysis of those statistics shows that 314 of those 377 tonnes were actually shipped from Hong Kong and 62 tonnes from the UK while none were shipped directly from South Africa. The same phenomenon occurred in 2016: of the 222 tonnes of gold declared on import into China as originating from South Africa, 212 tonnes was shipped from Hong Kong and only one tonne was shipped directly from South Africa. How can this be explained? SWISSAID discovered that it was due, on the one hand, to a lack of clarity in the declarations about the countries of origin of the imported gold and, on the other, to the presence of an LBMA-certified refinery in South Africa.

FIGURE 25 – Overview of the gold sector in South Africa

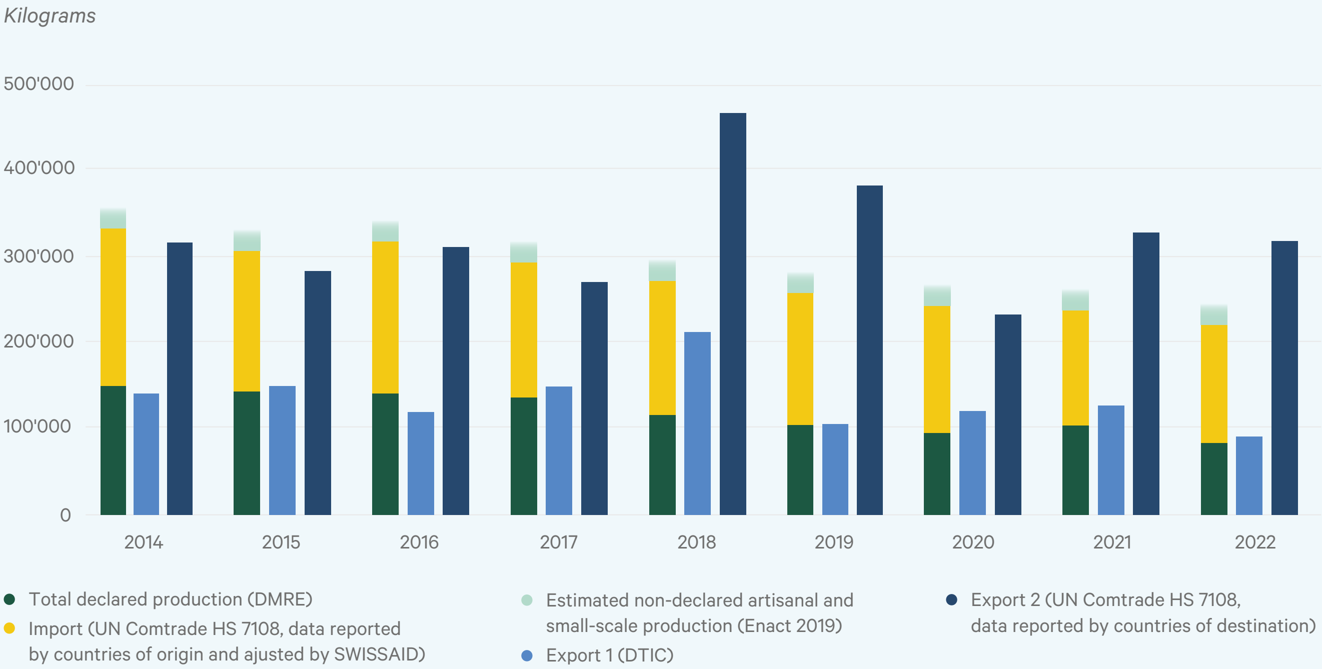


The United Nations Statistics Division (UNSD) states that importers are required to declare the country of origin and the country of dispatch of the gold they import.[53] The country of origin is the country where the gold was mined or underwent transformation (in this case a refining process), and the country of dispatch is the country from which it was shipped abroad. Bullion manufactured by Rand Refinery in South Africa is recognised as monetary gold and stored, exported and re-exported between the world's major trading centres and gold-importing countries. As long as they have not undergone any processing, they are always declared on import as originating from South Africa. It is only by indicating the country of shipment that it is possible to determine whether these ingots were shipped directly from that country or not.

The problem is that the authorities of gold-importing countries do not report all their data on countries of shipment, and some do so only partially. The authorities in Canada, the UK and Turkey have reported this type of data to UN Comtrade for the period 2012–2022. This has enabled SWISSAID to include only gold imported directly from South Africa in its analysis of these countries' gold imports. The Swiss Federal Office of Customs and Border Security (FOCBS) provided SWISSAID with this data, so in this case too it was possible to avoid counting South African bullion imported via a third country. But for other countries, this was impossible. For example, the Chinese authorities reported the countries of dispatch of gold imports into China to UN Comtrade only until 2017. SWISSAID contacted the General Administration of Customs of the People's Republic of China to obtain data for the following years,[54] but its request went unanswered. The Indian and Emirati authorities also failed to report data on countries of shipment to UN Comtrade.[55] This raises the issue of the traceability of gold and the transparency of customs declarations. **If importing countries do not declare their countries of shipment, this distorts the analysis and creates artificial discrepancies.**

Figure 26 shows an overview of the South African gold sector in which imports of gold from South Africa into other countries have been corrected as far as possible. Comparing this figure with the previous one (i.e. the corrected overview, Figure 25), we can see that the right-hand columns (dark blue) between 2015 and 2017 are lower. Between 2014 and 2017, the left-hand columns are slightly higher than the right-hand columns. In subsequent years (except for 2020), the right-hand columns are higher than the left-hand columns. This is mainly because SWISSAID only managed to correct gold imports from South Africa to China until 2017.

FIGURE 26 – Overview of the gold sector in South Africa (partially corrected)



Wherever possible, SWISSAID has corrected mirror data on exports of gold from South Africa to take into account only shipments that actually left South Africa in the year indicated above. Because of limited data availability, however, this could only be done for the following destination countries and years: Canada (2015-2022), China (2015-2017), Switzerland (2012-2022), Turkey (2013-2022) and the United Kingdom (2017, 2019-2022).

SOUTH AFRICA, A MAJOR TRANSIT COUNTRY

The vast majority of gold produced and imported into South Africa is then exported from that country. The corrected overview of the South African gold sector (Figure 26) demonstrates this: the left-hand columns are slightly higher than the right-hand columns for the years in which the maximum amount of data could be corrected (2014–2017). The information shared by Rand Refinery with SWISSAID also confirms this observation: the South African refinery refines almost all the gold legally imported into South Africa (see p. 30) and 98% of the industrial gold mined in South Africa, and exports 90–95% of the gold it refines.[56]

O.R. Tambo International Airport in Johannesburg, South Africa.

4.3 DISCREPANCIES IN CUSTOMS STATISTICS

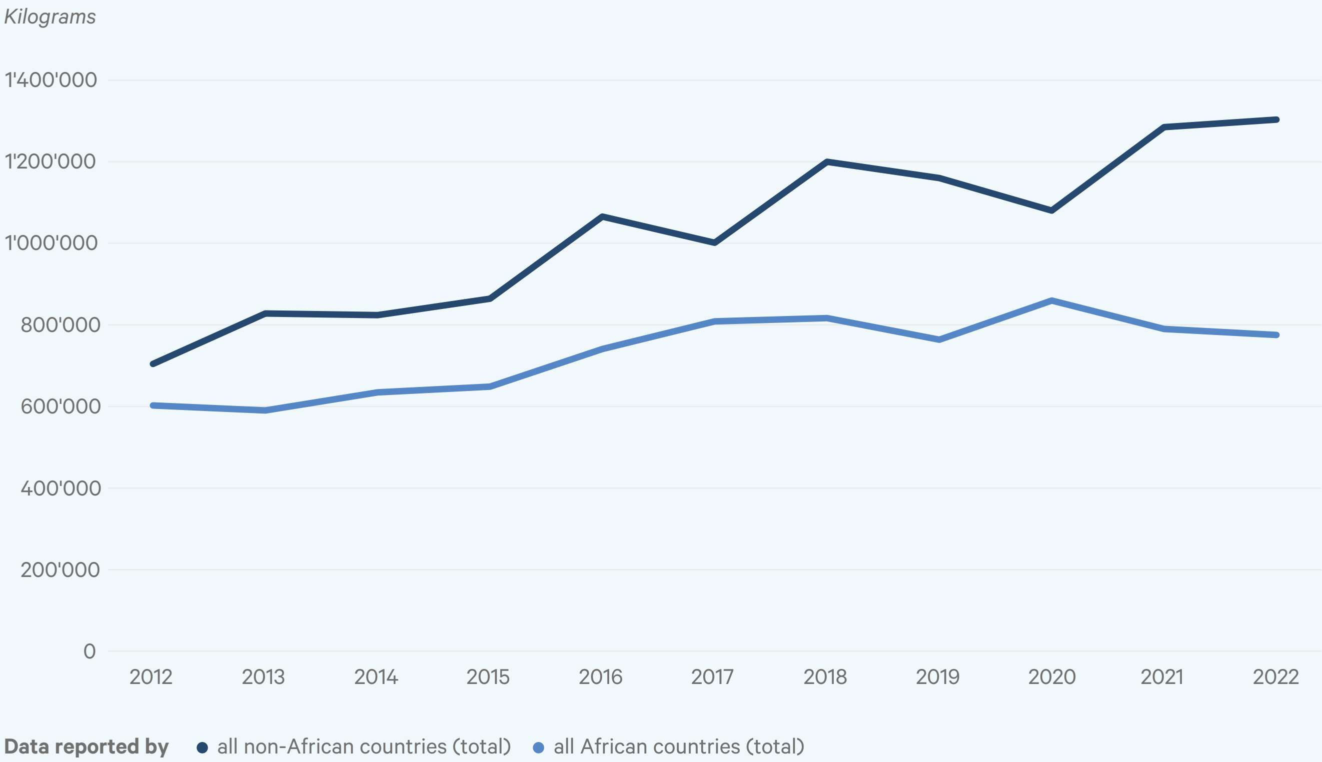
The gaps between reported gold exports from all African countries and gold imports from Africa into non-African countries increased significantly between 2012 and 2022, from 101.8 tonnes to 533.2 tonnes (see Figure 27). However, some of these discrepancies are partly artificial, as SWISSAID has not been able to correct all the data on gold imports from South Africa for several years (2018, 2019, 2021 and 2022).

Regarding the 2022 gap (533.2 tonnes), SWISSAID carried out a more detailed analysis to arrive at a more realistic figure. As a first step, the organisation excluded South Africa entirely from the calculation,[57] resulting in a gap of 437 tonnes.[58] As a second step, it quantified the artificial part of the gap due to gold imports declared by non-African states as originating from South Africa and subtracted it,[59] resulting in a gap of 435 tonnes. The two figures (437 and 435) are virtually identical, which means that **at least 435 tonnes of gold was smuggled out of Africa in 2022**. This figure does not take into account any undeclared gold exports from South Africa, so it is possible that in reality the total amount of smuggled gold in 2022 was even higher.

This figure of 435 tonnes corresponds to a commercial value of USD 30.7 billion[60] at the price of gold on 1 May 2024)[61] and represents between 38 and 44% of total gold production on the African continent in 2022.

> “At least 435 tonnes of gold was smuggled out of Africa in 2022.”

FIGURE 27 – Imports of gold from Africa into all non-African countries versus mirror data



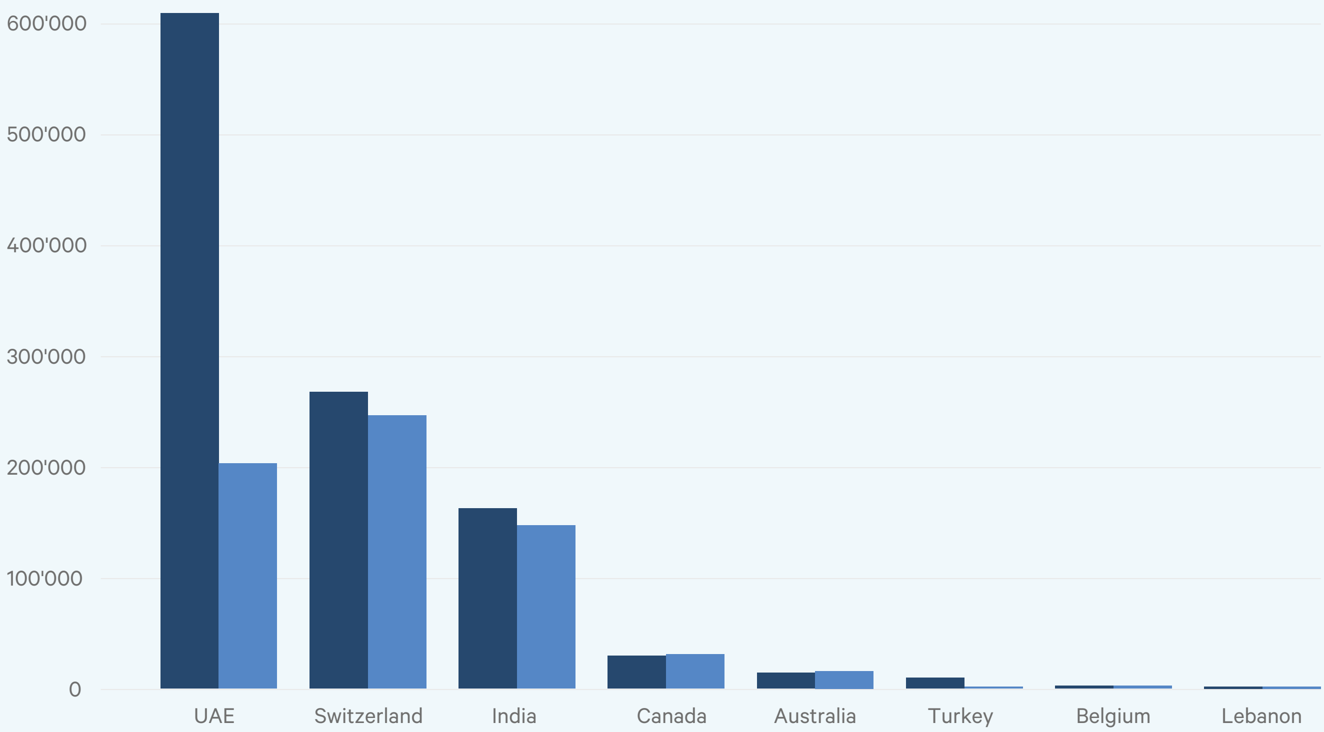
Wherever possible, SWISSAID has corrected data on imports of gold from South Africa to take into account only shipments that actually left that country in the year indicated above. Because of limited data availability, however, this could only be done for the following importing countries and years: Canada (2015-2022), China (2015-2017), Switzerland (2012-2022), Turkey (2013-2022) and United Kingdom (2017, 2019-2022).

Sources: (Non-African) countries of destination: UN Comtrade HS 7108. (African) countries of origin: statistics of the African states, see appendix 5.

The main discrepancy between gold exports from African countries and gold imports from Africa into non-African countries clearly lies with the UAE (see Figure 28). **In 2022, the UAE imported 405 tonnes that were not declared for export in the countries of origin, whereas the gap was only 21 tonnes for Switzerland or 15 tonnes for India**, the other two major gold importing countries from Africa between 2012 and 2022.

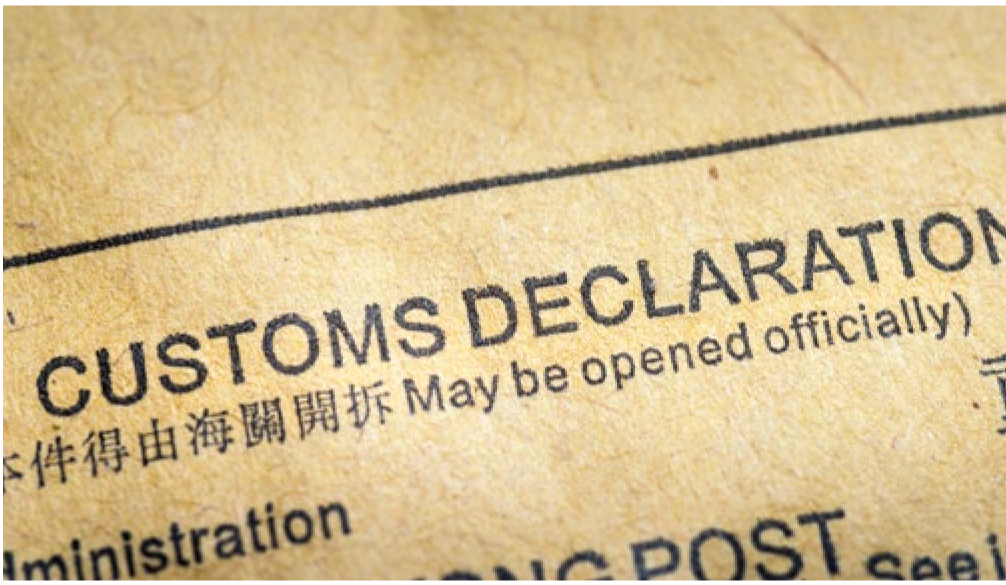
FIGURE 28 – Imports of gold from Africa into the main non-African importing countries in 2022 versus mirror data

Kilograms



Data reported by ● the (non-African) importing country ● all African countries (total)

Sources: (Non-African) countries of destination: UN Comtrade HS 7108. (African) countries of origin: statistics of the African states, see appendix 5.



A customs declaration envelope

4.4 DESTINATION COUNTRIES FOR AFRICAN GOLD

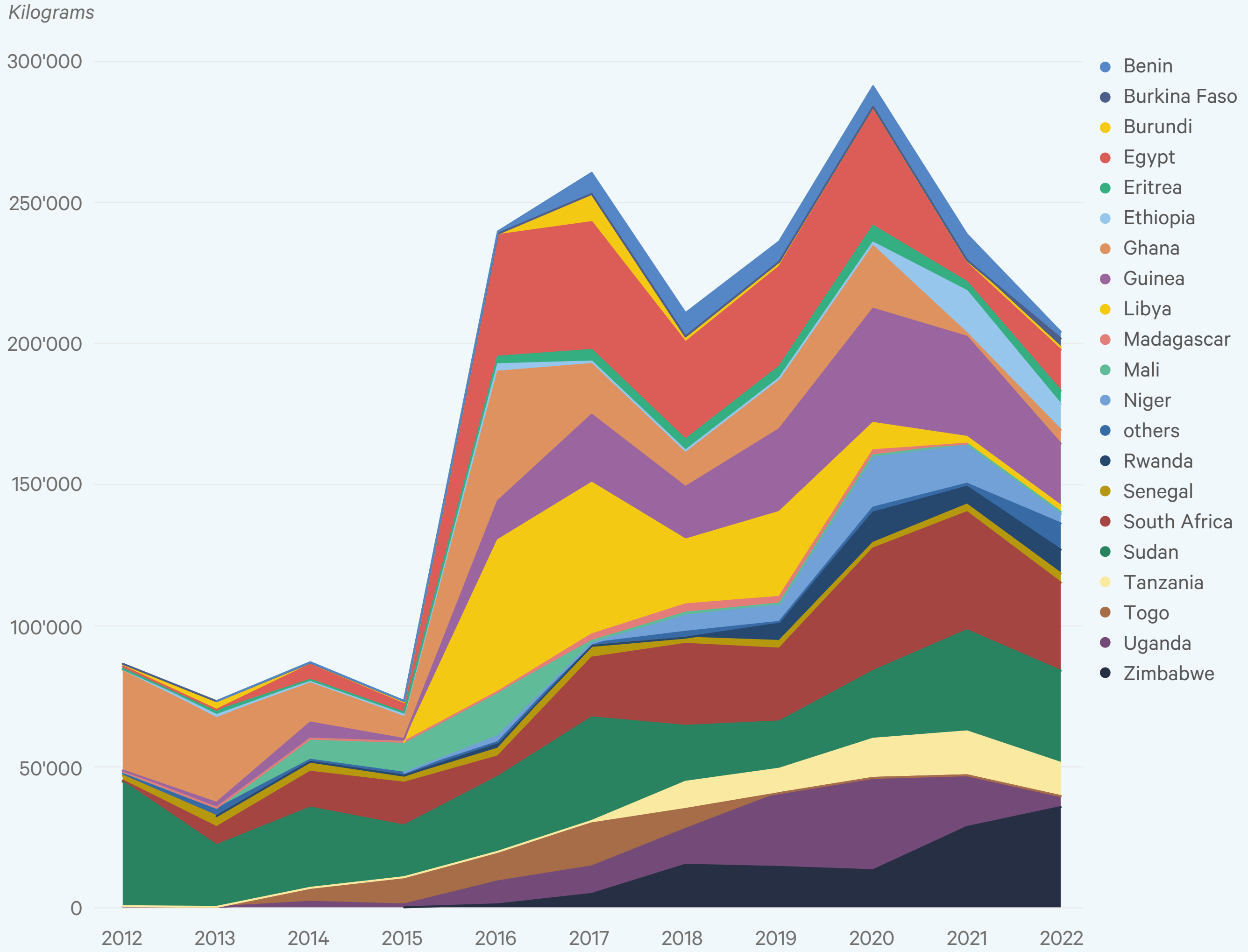
Besides the three main destination countries (UAE, Switzerland, India), SWISSAID has analysed African gold imports from Turkey, Canada, Australia, Lebanon and China. For the year 2022, the quantities of gold imported by countries not included in the analysis below represent 3.7% of the total African gold imported by non-African countries, i.e. 48 tonnes. Of this, 39 tonnes was imported from South Africa.

UNITED ARAB EMIRATES

The United Arab Emirates (UAE) is one of the main international hubs for the gold trade. Dubai, nicknamed the City of Gold, plays a central role in this trade. The city is home to more than twenty gold refineries[62] and more than 7,000 traders in precious metals and stones,[63] active in particular in the gold souk and the Dubai Multi Commodities Centre (DMCC) free zone. In 2022, the UAE reported importing 1,059 tonnes of gold (USD 59.5 billion) from around the world.[64]

Gold exports from African countries to the UAE rose sharply between 2012 and 2022, from 86.3 tonnes to 204 tonnes (see Figure 29). The steep rise between 2015 and 2016 (+166 tonnes) is largely due to the massive increase in gold exports from Egypt, Libya and, to a lesser extent, Ghana.

FIGURE 29 – Exports of gold from all African countries to the United Arab Emirates



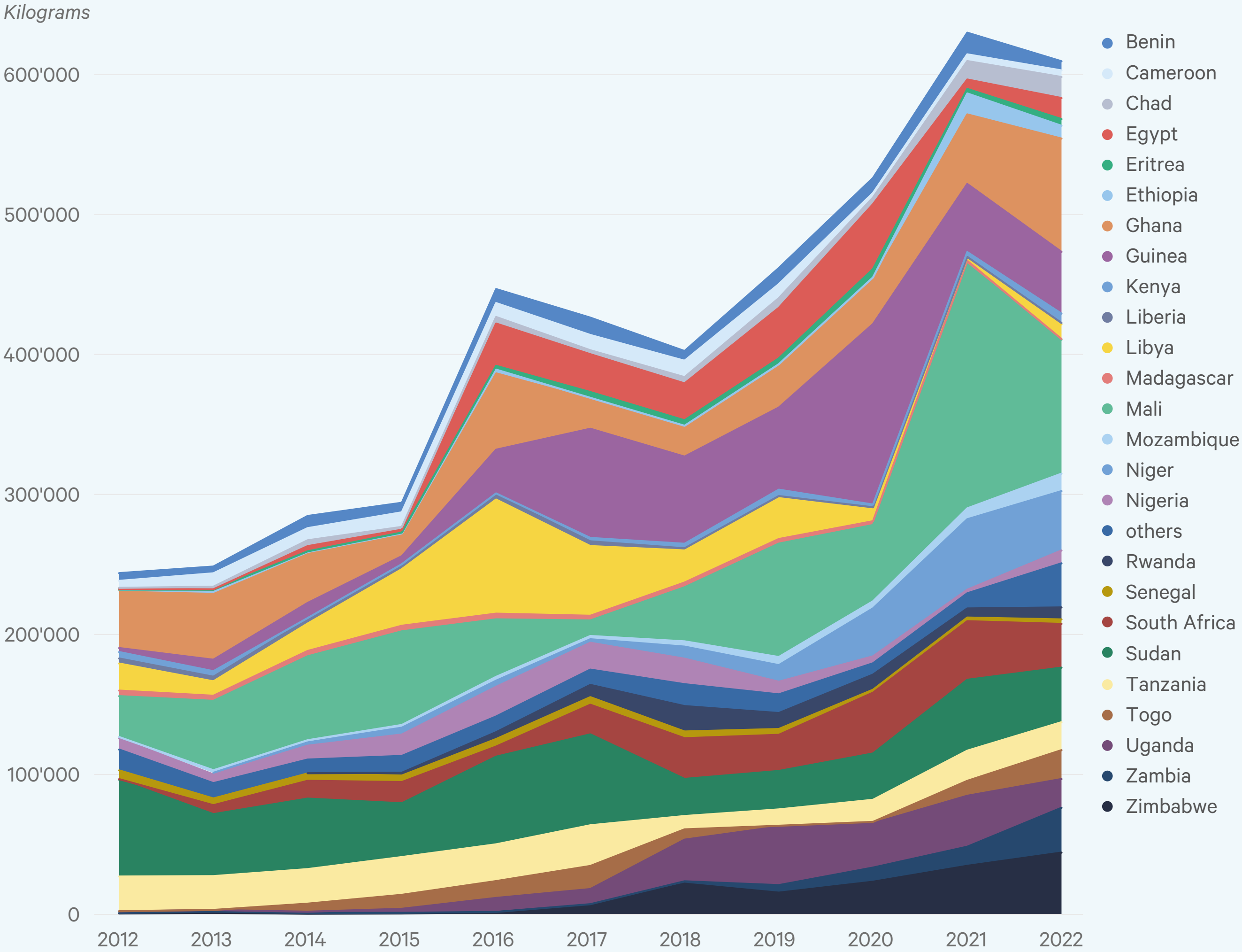
Sources: statistics of the African states, see appendix 5.

The picture is different if we look at official Emirati statistics (see Figure 30). Gold imports from Africa to the UAE more than doubled between 2012 and 2022, from 243 tonnes to 609 tonnes. The 2022 figure, which corresponds to a trade value of USD 34.5 billion, represents 58% of the total gold imported into the UAE.[65] The peak in 2021 is partly explained by gold imports from Mali, which reached 174 tonnes that year, the largest amount of gold imported into the UAE from any single country.[66]

The gold souk in Dubai's Deira district

FIGURE 30 – Imports of gold from all African countries into the United Arab Emirates

Kilograms



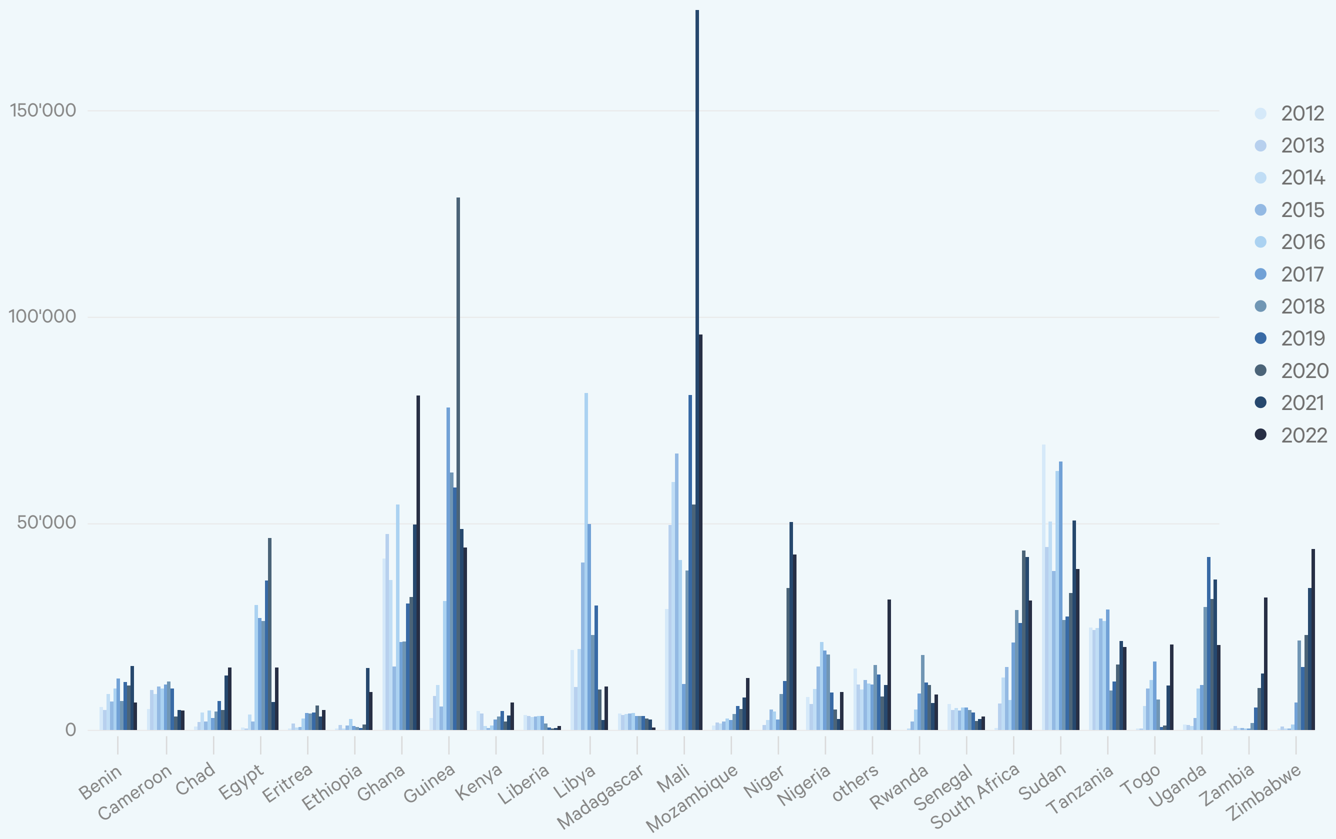
Sources: UN Comtrade HS 7108, data reported by the UAE.

Dubai, nicknamed the City of Gold, plays a central role in the African gold trade.

Several observations can be made from Figure 31. The first is that the Emirati authorities have reported gold imports from a multitude of African countries between 2012 and 2022 (e.g. 43 countries in 2022). The second is that, in some cases, the annual quantities of gold imported from the same African country over this period have varied considerably. For example, there are very high peaks in the case of Guinea and Mali. Finally, the third observation is that the largest quantities of African gold imported into the UAE between 2012 and 2022 came from Mali, Guinea, Ghana, Libya, Sudan and Niger (more than 50 tonnes of gold in at least one year).

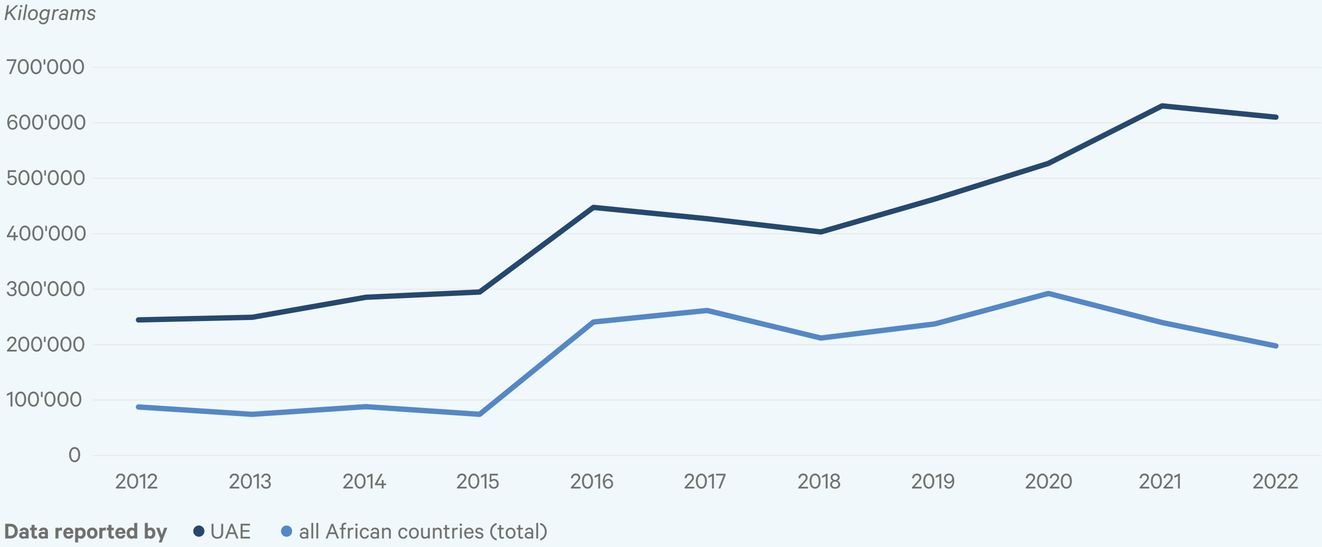
FIGURE 31 – Imports of gold from all African countries into the United Arab Emirates

Kilograms



Sources: UN Comtrade HS 7108, data reported by the UAE.

FIGURE 32 – Imports of gold from Africa into the United Arab Emirates versus mirror data



Sources: UAE: UN Comtrade HS 7108. Countries of origin: see appendix 5.

The gaps between gold exports from African countries to the UAE and imports of African gold into the UAE have been considerable throughout the 2012–2022 period (see Figure 32)**. Over these eleven years, they reach 2,569 tonnes in total,** which corresponds to a trade value of around **USD 115.3 billion.**[67] In recent years, the gaps have tended to widen, rising from 234 tonnes in 2020 to **405 tonnes in 2022**, for example.

After analysing the data in detail, SWISSAID has come to the conclusion that these discrepancies can be attributed to smuggling. In its analysis, the organisation took numerous precautions, including, but not limited to, identifying and avoiding artificial discrepancies between customs statistics (see p. 7). It not only verified the reliability of Emirati statistics on gold imports from Africa but also compensated for shortcomings in African statistics on gold exports to the UAE.

SWISSAID believes that the vast majority of customs declarations made in the UAE are true. This is based on the following observations:

- Several senior Emirati officials have confirmed to SWISSAID that the data on gold imports into the UAE is correct.[68]
- There is no tax on gold in the UAE and no specific restrictions on the import of gold from certain countries,[69] so there is no incentive for importers to declare a false origin for gold when it enters the UAE.
- Importers declare the origin of gold imported into the UAE even when it comes from a country involved in armed conflict or subject to international sanctions (recent examples include Libya, Sudan, Russia and Venezuela) and the Federal Competitiveness and Statistics Centre (FCSC) publishes this type of information.[70]
- There is no discrepancy between UN Comtrade's statistics on gold imports into the UAE and those of the FCSC.[71]
- In general, the ratio between the value and quantity declared on importation corresponds to the price of gold.[72]
- Imports come from countries where gold exports to the UAE have been documented

Many statistics on gold exports from African countries are incomplete. SWISSAID has therefore had to take the following steps to ensure the accuracy of its analysis.

- The organisation contacted the administrations of all the African countries to obtain the missing data or to check whether the data it had collected was correct.
- SWISSAID has artificially added to the gold exports of the country of origin the imports of gold declared as originating from that country into the UAE in cases where an African state: has not published any statistics on its country's gold exports and

has refused to reply to SWISSAID (e.g. the Eritrean state); has refused to provide SWISSAID with all its statistics (e.g. the Ethiopian and the South African states); has not yet published any statistics on its country's gold exports (e.g. the South African state). has refused to provide SWISSAID with all its statistics (e.g. the Ethiopian[73] and the South African states[74]); has not yet published statistics for the year 2022 (e.g. the Cameroonian, the Gabonese and the Congolese states).

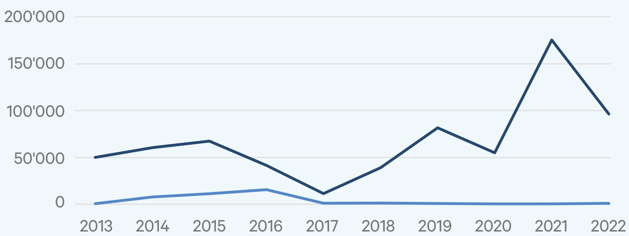
- SWISSAID has artificially attributed gold exports to the UAE to an African country of origin in cases where, in all likelihood, the African state has: made an error in declaring the country of destination (e.g. the Beninese state for 2019)[75] or published gold export statistics without disaggregating them by country of destination (e.g. the Chadian and Ugandan states for 2022).

- Finally, SWISSAID has, as a general rule, taken into account the higher figures (insofar as they are realistic) in cases where public agencies belonging the same state have published different statistics on the country's gold exports.

The discrepancies between gold exports from African countries to the UAE and imports of gold from Africa into the UAE are not limited to individual countries or years; they span many countries and typically many years (between 2012 and 2022) for each country, as shown in Figures 33–39:

FIGURE 33 – Exports of gold from Mali to the United Arab Emirates versus mirror data

Kilograms

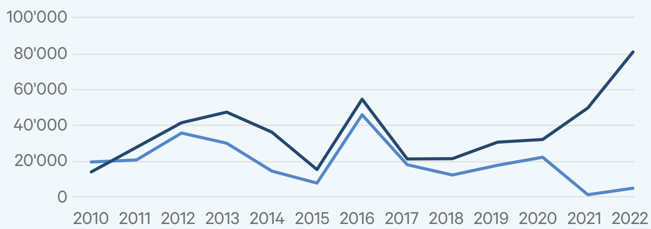


Data reported by

- Mali (UN Comtrade HS 7108 and INSTAT)
- United Arab Emirates (UN Comtrade HS 7108)

FIGURE 34 – Exports of gold from Ghana to the United Arab Emirates versus mirror data

Kilograms

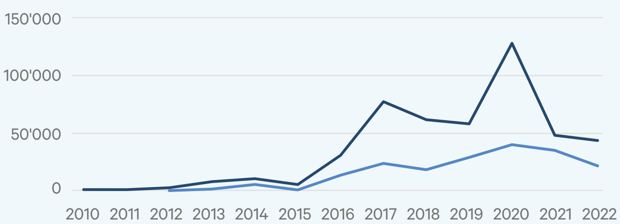


Data reported by

- Ghana (Bank of Ghana)
- United Arab Emirates (UN Comtrade, HS 7108)

FIGURE 35 – Exports of gold from Guinea to the United Arab Emirates versus mirror data

Kilograms

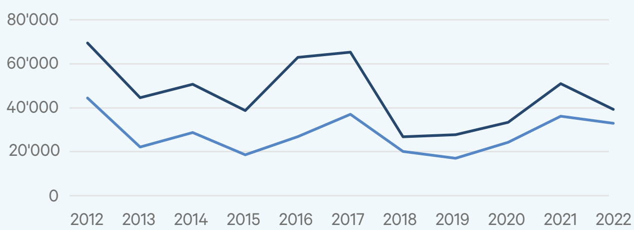


Data reported by

- Guinea (2012-2013: INS; 2014-2022: DGD)
- UAE (UN Comtrade HS 7108)

FIGURE 36 – Exports of gold from Sudan to the United Arab Emirates versus mirror data

Kilograms



Data reported by

- Sudan (Central Bank of Sudan)
- United Arab Emirates (UN Comtrade HS 7108)

FIGURE 37 – Exports of gold from Nigeria to the United Arab Emirates versus mirror data

Kilograms

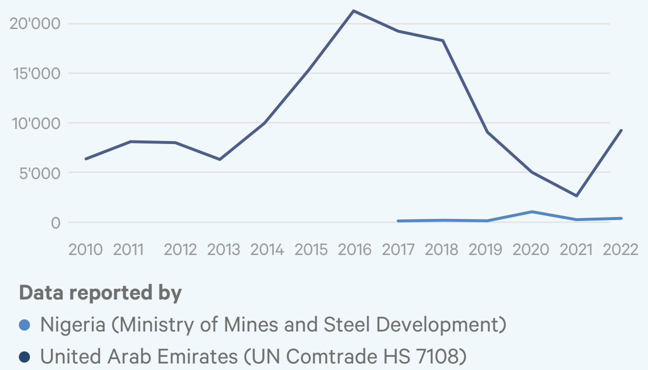
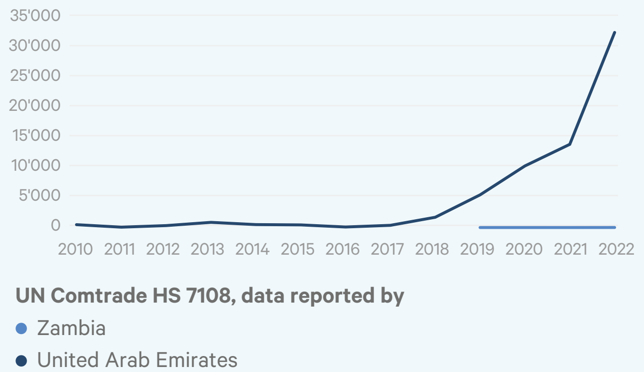


FIGURE 38 – Export of gold from Zambia to the United Arab Emirates versus mirror data

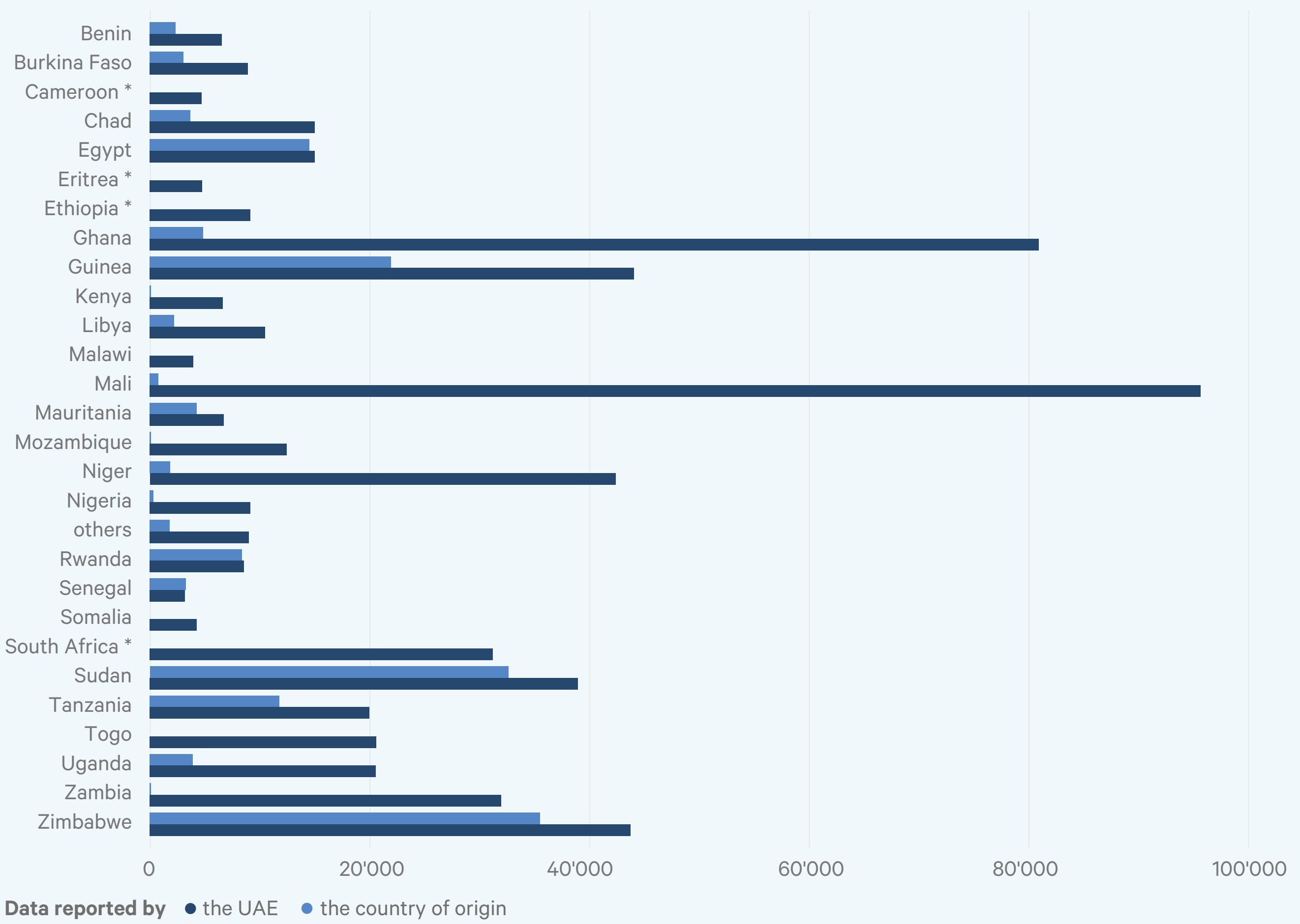
Kilograms



The gaps between African countries' gold exports to the UAE and the UAE's gold imports from Africa in 2022 are high for most African countries (see, e.g., Figures 33–38). In the case of 21 countries, the gold declared on export as destined for the UAE is less than half of the gold declared on import into the UAE as originating from that country (see Figure 39). The highest discrepancies in absolute terms are for Mali, Ghana and Niger (the lowest for Egypt, Rwanda and Senegal).

FIGURE 39 – Imports of gold from all African countries into the United Arab Emirates in 2022 versus mirror data

Kilograms



Sources: UAE: UN Comtrade HS 7108. Countries of origin: statistics of the African states, see appendix 5.
For countries marked with an asterisk, data on gold export to the UAE in 2022 could not be obtained or does not exist.

Real scale of the smuggling of gold out of Africa that is headed for the UAE

Gold smuggling between Africa and the UAE is actually even greater than the discrepancies between exports and imports calculated by SWISSAID (i.e. 2,569 tonnes of gold in total over the period 2012–2022 and 405 tonnes of gold in 2022) suggest. This is because some of the gold that appears in the export statistics of African countries was not declared when it was first exported or was under-declared.

Some of the gold imported into the UAE between 2012 and 2022 was declared for export in an African transit country but was not declared at the production stage or for export in the country in which it was mined. This is true for most of the gold exported to the UAE from transit countries with low gold production, namely Benin, Libya, Togo, Rwanda and Uganda. This is also true for some of the gold exported to the UAE from transit countries with high gold production, including Mali, Guinea, Niger and South Africa. In some of these countries (e.g. Guinea), gold in transit is declared for export (re-export), in others (e.g. Mali) it is not.

Some of the African gold imported into the UAE between 2012 and 2022 was incorrectly declared for export. In some cases, it was the value of the gold that was under-declared. This applies in particular to most of the gold exported from Togo and Benin and some of the gold exported from Niger to the UAE (see p. 74). In other cases, an error was probably made in declaring the country of destination. For example, the declared gold exports from Egypt to the UAE between 2016 and 2018[76] are significantly higher than the mirror data and correspond precisely to those that should in theory have been declared to Canada. Such an error artificially increases the quantities of gold declared for export to the UAE.

Several African government agencies and senior officials have publicly acknowledged the existence and problematic nature of the smuggling of gold out of Africa that is headed for the UAE. The Ministry of Mines of South Sudan confirmed to SWISSAID that some of the country's gold is smuggled to Dubai.[77] Burkina Faso's former Minister of Mines, Oumarou Idani, told Reuters that his country was "leaking gold to UAE on a massive scale."[78] A Bloomberg article claims that authorities in Sudan, Nigeria, DRC, Zimbabwe, Mali, Ghana, Burkina Faso, CAR and Niger "complain that tons of gold leaks across their borders each year, and they allege most of it heads to Dubai.[79]

In order to better control the flow of gold leaving their countries, the authorities of several African countries have signed agreements with their Emirati counterparts. For example, the Nigerian authorities have negotiated a bilateral agreement with the Emirates to track the illicit flow of gold from Nigeria to Dubai.[80] In another example, the DRC authorities signed a cooperation agreement with the Emirati authorities in October 2021, with the aim of combating smuggling and promoting fair trade in gold. The agreement includes the creation of a company, Primera Gold DRC, through a public-private partnership. This company has already been set up and shipped its first shipments of raw ASM gold to the UAE in January 2023. However, the United Nations Group of Experts on the DRC has expressed doubts about the company's practices.[81]

When asked by SWISSAID about gold imported into the UAE that was not declared for export to African countries, the Ministry of Economy of the UAE replied: "[the] UAE cannot be held accountable for other government's export records. Only our own, where we have sophisticated technologies and systems to track and verify the data."[82] It also stressed in its response that the UAE has adopted measures to curb money laundering in the gold sector and claimed that the country's Responsible Sourcing Regulations (see below) are aligned with the OECD Guidance.

Types of African gold imported into the UAE

Most of the gold imported into the UAE from Africa comes from ASM. SWISSAID calculated that **between 80% and 85% of all gold mined in Africa in 2022 by artisanal or small-scale methods was exported to the UAE**, either directly or via African transit countries. This represents between 79% (480 tonnes) and 84% (509 tonnes) of the 609 tonnes of gold imported into the UAE from Africa that year.[83] In its response to SWISSAID, the Ministry of Economy of the UAE made it clear that: "The UAE believes [sic] that artisanal mining is a major element in the global gold system. The approach we're taking, which we can discuss in detail, increased the ASM producer's income for their product from 75% of the international price of gold to more than 85% within the last 15 years."[84]

PART OF AFRICAN ASM GOLD DESTINED FOR INDIA TRANSITS THROUGH DUBAI

SWISSAID's review of detailed Indian gold import statistics revealed that the majority of imports of ASM gold from Ghana and Guinea were by UAE-based gold exporters. According to an Emirati expert consulted by SWISSAID, this is because ASM gold from these two countries generally transits through Dubai, but is not registered by Emirati customs as imports.[85] According to this expert, the reasons for this transit via Dubai are, on the one hand, the more numerous air connections between African countries and the UAE than between African countries and India, and on the other hand, the preference of Indian banks to make payments to Emirati accounts rather than to African accounts.

The quantities of African industrial and semi-industrial gold imported into the UAE each year are significantly lower than those of ASM gold. Most of the African industrial and semi-industrial gold is processed by refineries certified to the LBMA standard[86] and no Emirati refinery has this certification (although some voluntarily submit to LBMA audits). Assuming that all African industrial gold processed by non-LBMA refineries had been sent to the UAE by 2021, the UAE would have imported a maximum of 72 tonnes of this type of gold. SWISSAID's analysis suggests that the reality is more likely to be below 50 tonnes. The industrial or semi-industrial gold mines that have shipped their gold to Dubai in recent years are those in Zimbabwe (via FGR, a total of 11,159 kg in 2022[87]) and some of those in Sudan, Niger, Kenya, Burkina Faso, Mali and Guinea.[88]

Finally, the quantities of "recycled" gold (the term "reprocessed" would be more appropriate) imported into the UAE from Africa are also relatively small and unlikely to have reached 50 tonnes in 2022. In this case, the gold comes mainly from Egypt and South Africa, and may contain gold fresh from the mine. Some of the "recycled" gold imported from Egypt could be of dubious origin, as in the mid-2010s half of the gold entering the Egyptian market was considered to be illegal[89] and some Sudanese mined gold is now thought to transit through Egypt.[90] The same applies to "recycled" gold imported from South Africa: according to a player in the Emirati gold sector interviewed by SWISSAID,[91] most of this gold is in fact undeclared ASM gold originating either from the "Zama Zamas," in other words South Africa's informal mining sector, or smuggled ASM gold from neighbouring countries, particularly Zimbabwe.

With regard to imports of monetary gold from Africa into the UAE, a player in the Emirati gold sector confirmed to SWISSAID that the quantities are small.[92] He pointed out that Emirati banks active in physical gold trading are rare. This is consistent with the fact that Rand Refinery, which produces, among other things, monetary gold, has only exported small quantities of gold to the UAE (a maximum of 8 tonnes per year between 2016 and 2020).[93] Some studies suggest that Libya's gold exports to the UAE consisted of monetary gold, more specifically gold reserves held by the Central Bank of Libya or reserves built up under Muammar Gaddafi.[94] However, according to a Libyan expert interviewed by SWISSAID, the sale of these reserves explains only a small part of the exports.[95] A detailed analysis shows that these reserves have changed very little since 2011. It seems more plausible that Libya's gold exports to the UAE reflect Libya's role as a transit country for gold from neighbouring countries.[96]

A small proportion of the gold declared on import into the UAE as coming from African countries may originally have come from non-African countries or may have been falsely declared. For example, it would appear that gold from Venezuela transited through Mali and Guinea in 2020 before reaching Dubai[97] or was exported directly to Dubai but declared at the UAE border as originating from Mali, more specifically from the Wassoul'or mine.[98] SWISSAID was unable to determine whether this had happened again in 2022.

Link between gold from Africa's conflict zones and the UAE

The UAE is the main destination for the vast majority of ASM gold mined in the 18 African countries on the Indicative, non-exhaustive list of conflict-affected and high-risk areas (CAHRAs) under Regulation (EU) 2017/821.[99] The countries in question are: Burkina Faso, Burundi, Cameroon, Chad, Egypt, Ethiopia, Eritrea, Libya, Mali, Mozambique, Niger, Nigeria, CAR, DRC, Somalia, Sudan, South Sudan and Zimbabwe. Some of the gold from these countries is imported directly into the UAE, and some first transits through a neighbouring country.[100] **In 2022, 317 tonnes of gold was imported into the UAE from these 18 African countries and 97 tonnes from African countries that serve as transit countries for gold originating from African CAHRAs. The total, i.e. 414 tonnes, represents 68% of all gold imported into the UAE from Africa.**[101]

In detail, in 2022, the Emirati authorities were the only ones to report gold imports from Chad, Ethiopia, Eritrea and South Sudan to UN Comtrade. More than 95% of ASM gold from Mozambique, Mali, Niger, Somalia, Sudan, Cameroon, Nigeria and Zimbabwe declared on import into non-African countries was imported into the UAE. Some of the gold from these countries was smuggled to neighbouring countries (from Sudan to Chad[102] and Egypt,[103] from Nigeria to Niger[104] and from Zimbabwe to South Africa[105]), but the majority of ASM gold exported from these neighbouring countries was imported into the UAE (100% for Chad, 95% for Egypt and 96% for Niger). The Zimbabwean gold smuggled into South Africa is difficult to trace, but it is quite possible that some of it ended up in the UAE imports from South Africa, according to a player in the Emirati gold sector interviewed by SWISSAID.[106] ASM gold from Burkina Faso was smuggled to Mali and Togo and, to a lesser extent, to Benin and Niger,[107] and almost all ASM gold transiting through these countries was imported into the UAE (96% for Benin, 96% for Niger and 100% for Togo). Most ASM gold from the DRC was smuggled through Uganda and Rwanda[108] and, to a lesser extent, Burundi[109] (some of the gold from South Sudan also transited through Uganda[110]) and 60% of the gold from Uganda, 95% of the gold from Rwanda and 99% of the gold from Burundi was imported into the UAE. Some 78% of the gold from Libya and 70% of the gold from the CAR was declared for import into the UAE. Some of the gold from the CAR also transited through Cameroon[111] and Rwanda[112] before being imported into the UAE.

The UAE's role as a major hub for gold from conflict zones has long been known. Analysis has shown that 46% of total gold imports into the UAE in 2016 came from countries affected by armed conflict or at high risk.[113] Similarly, a report published in 2021 indicates that more than USD 4 billion of gold from conflict zones in Central and East Africa was imported into the UAE in 2019.[114] The Financial Intelligence Unit (FIU) of the UAE, a state agency responsible for combating money laundering,[115] recognises the risk of conflict gold transiting through the UAE. In a report published in October 2022, it states that dealers in precious metals and stones (DPMS) "are possibly involved in gold smuggling from conflict/affected [sic] and high-risk areas or in the illegal transport of gold through other high-risk jurisdictions. From there, gold enters the country and is further sold to other local DPMS entities, or is processed and re-exported to Western European countries."[116]

Links between the financing of armed groups and gold mining or trading have been demonstrated for the vast majority of the 18 African countries on the European Union (EU) list of CAHRAs.[117] In particular, **several UN Groups of experts have explicitly mentioned the UAE as a destination for smuggled gold or gold linked to armed groups.**[118]

The fact that Emirati companies source gold from countries listed on the EU list of CAHRAs is not in itself problematic – the OECD Guidance does not recommend divestment in cases where ore is sourced from a CAHRA, but rather the exercise of enhanced due diligence.[119] What is problematic, however, is that some of these companies do not exercise enhanced due diligence when sourcing gold from CAHRAs and often source from countries through which gold mined in CAHRAs transits rather than directly from the CAHRAs themselves.

Several organisations have also warned against the counter-productive effects of drawing up a list of CAHRAs. As Rashad Abelson of the OECD rightly points out, such a list must not lead to the stigmatisation of certain countries or regions, nor cause companies to disengage or stop sourcing from these countries or regions.[120] On the contrary, it is precisely these countries or regions that need responsible investment and, as Louis Maréchal of the OECD explains, "in the long term, the [OECD] Guidance should encourage companies to make responsible commitments in countries weakened by conflict."[121]

One of the shortcomings of the EU list of CAHRAs is that it does not include the countries through which gold extracted in CAHRAs transits. This is particularly problematic, as CAHRAs gold is often not officially exported from the countries where it was mined, but from neighbouring countries.[122]

Transport of gold
Gold exported from African countries to the UAE is transported by air, in hand luggage or in the hold, on scheduled flights or in private jets. The UAE airport hub, in particular Dubai International Airport, plays a central role in this trade, with direct connections to the majority of African gold-exporting countries.

The role of brokers transporting gold in hand luggage has been widely documented,[123] but there are no official statistics specific to this mode of transport, so it is impossible to know the quantities involved. Some Emirati trading companies describe on their websites the procedures to be followed to legally import gold into the UAE in hand luggage.[124] In November 2023, the DMCC and the World Gold Council (WGC) pledged to work together to combat the illegal transport of gold in hand luggage.[125] Among other things, they plan to analyse the scale of the trade in illicit gold transported in hand luggage, formulate policy recommendations and harmonise customs declarations. For several years now, the director of the DMCC, Ahmed Bin Sulayem, has been publicly advocating a total ban on the transport of gold in hand luggage.[126] Regulating this means of transporting gold would represent a major step forward in the fight against illicit gold flows.

Gold from Africa is also transported to the UAE by private jet. In 2020, the Cameroonian authorities arrested two Canadians and a Cameroonian who were preparing to illegally export 250 kg of gold to the UAE by this means of transport.[127] A GI-TOC report also mentions the use of private jets to transport smuggled gold from Kenya to the UAE in 2022.[128] Private jets carrying gold from Africa that land in the UAE often come from African countries known to be transit countries in the gold trade, such as Uganda.[129]

Regulation of the gold sector in the UAE
The hundreds of tonnes of smuggled gold imported into the UAE from Africa each year between 2012 and 2022 suggest that Emirati trading companies and refineries have not exercised their due diligence properly. Ensuring the legality of supplies, in particular that gold has been properly declared for export in the countries of origin, is a basic element of due diligence. The UAE's Financial Intelligence Unit (FIU) recognised this problem when it wrote in October 2022: "There are indications that local associated refineries are sourcing gold from miners without conducting adequate customer due diligence."[130]

The Emirati companies' breaches of due diligence are caused by shortcomings in the regulation of the gold trade in the UAE: few customs controls, weak supervision of market players, limited corporate due diligence requirements and the non-binding nature of the official Emirati standard for good practice applying to refineries.[131] The UAE legal framework was revised in January 2023, but has yet to prove itself.

Like the *Dubai Good Delivery Standard*, which has existed since 2005, the UAE Good Delivery Standard, which replaced it in 2021,[132] is a non-binding standard. Only six refineries have signed up to it,[133] including three in the UAE (Sam Precious Metals FZ LLC, Al Etihad Gold Refinery DMCC, Emirates Gold DMCC[134]) and three abroad (Valcambi in Switzerland, The Perth Mint in Australia and Ahlatci Metal Rafineri A.S. in Turkey). Some Emirati refineries have joined the Responsible Jewellery Council (RJC) Chain of Custody (CoC).[135] There is no official list of registered gold refineries in the UAE.

In recent years, pressure on the Emirati authorities has intensified. Long denounced by civil society, the media and UN expert groups, the UAE's role as a hub for gold of dubious origin has recently been criticised by other types of stakeholders. In November 2020, the LBMA threatened to hinder the entry of Emirati gold into the international market if the Emirati authorities did not take steps to meet certain basic regulatory standards.[136] In October 2021, the Swiss authorities warned their country's refineries of the risks inherent in sourcing gold from the UAE.[137] In June 2023, the U.S. authorities recommended that private companies carry out increased due diligence on their gold purchases and explicitly mentioned the UAE.[138] Finally, in March 2022, the Financial Action Task Force (FATF), an intergovernmental body dedicated to combating

"The Emirati authorities must at all costs ensure the effective implementation of these new regulations, supervise the activities of the refineries and impose sanctions in the event of non-compliance with the rules."

money laundering and the financing of terrorism, placed the UAE on its grey list.[139] The decision was prompted by an assessment carried out by the FATF in 2020, which identified "issues in the supervision of some of the higher risk sectors, such as [...] dealers in gold."[140] The body wrote in its report that "the value of seizures is likely lower than would be expected in the UAE, which is one of the major transit points for gold internationally. While open sources report that gold is being smuggled from West Africa to the UAE, there were no seizures or confiscations in this regard."[141] In response to the FATF assessment, the UAE authorities published a Risk Assessment Outreach Program in which they identified the gold and precious metals sector as a high-risk sector and recommended that the private sector approach any transaction with caution.[142] In February 2024, the FATF removed the UAE from its grey list, in part following a commitment by the UAE authorities to implement an action plan to address the deficiencies identified.[143]

In response to the criticisms mentioned above, the Ministry of Economy of the UAE has developed new regulations entitled *Due Diligence Regulations for Responsible Sourcing of Gold*.[144] These regulations, which state that they are based on the OECD Guidance and its annexe on gold,[145] came into force in January 2023. They apply mainly to gold refineries.[146] Among other things, they require refineries sourcing gold from ASM to identify and assess risks, in particular by finding out whether each "mining project can be considered legitimate ASM (i.e. legally registered [...])"[147]. For high-risk or red flag supply chains, the regulations require refineries to exercise enhanced due diligence, which in particular involves on-site visits "during the establishment of relationship and on an ongoing basis (at least on bi-annual basis)."[148] This applies not only to CAHRAs, but also to the countries through which gold extracted in CAHRAs transits.[149] In parallel with these new regulations on gold supplies, the UAE authorities have also adopted new regulations on imports into the UAE, which strengthen the customs declaration requirements.[150]

The entry into force of the *Due Diligence Regulations for Responsible Sourcing of Gold* has brought about major changes for Emirati refineries, particularly with regard to the exercise of their due diligence. They can no longer simply wait for gold to be delivered to Dubai and ignore the precise origin of the gold and the conditions under which it was mined. Since 2023, they must exercise enhanced due diligence on the majority of their supplies and visit mining sites to carry out checks.

Most of the concerns expressed to date about the *Due Diligence Regulations for Responsible Sourcing of Gold* relate to their implementation. In a report published in June 2023 (i.e. after the regulations came into force), the UN Group of Experts on the DRC expressed doubts about the way in which the Emirati refinery AuricHub was exercising its due diligence. In particular, the Group stated: "It is [...] highly possible that the supply chain of Primera Gold DRC [AuricHub's main supplier] could be permeated by gold produced from sites which remain under the control of armed groups.[151] In an exchange with SWISSAID in November 2022, a representative of an Emirati refinery stated that the new regulations would not change his company's practices and that it would continue to source gold without carrying out checks at the mines.[152] This example clearly illustrates the task facing the Emirati authorities: they must at all costs ensure the effective implementation of these new regulations, supervise the activities of the refineries and impose sanctions in the event of non-compliance with the rules[153]. They must also find ways of overcoming the many problems posed by audits of precious metals refineries carried out by private companies (conflicts of interest, lack of knowledge, skills and experience on the part of the auditors, opaque audit reports, and so on), so that these audits fulfil their purpose.

In theory, if the *Due Diligence Regulations for Responsible Sourcing of Gold* are implemented correctly, this should automatically lead to a significant reduction in the gap between African gold exports to the UAE and imports of gold from Africa into the UAE. The evolution of this gap is therefore a key element in assessing the implementation and impact of this new regulation.

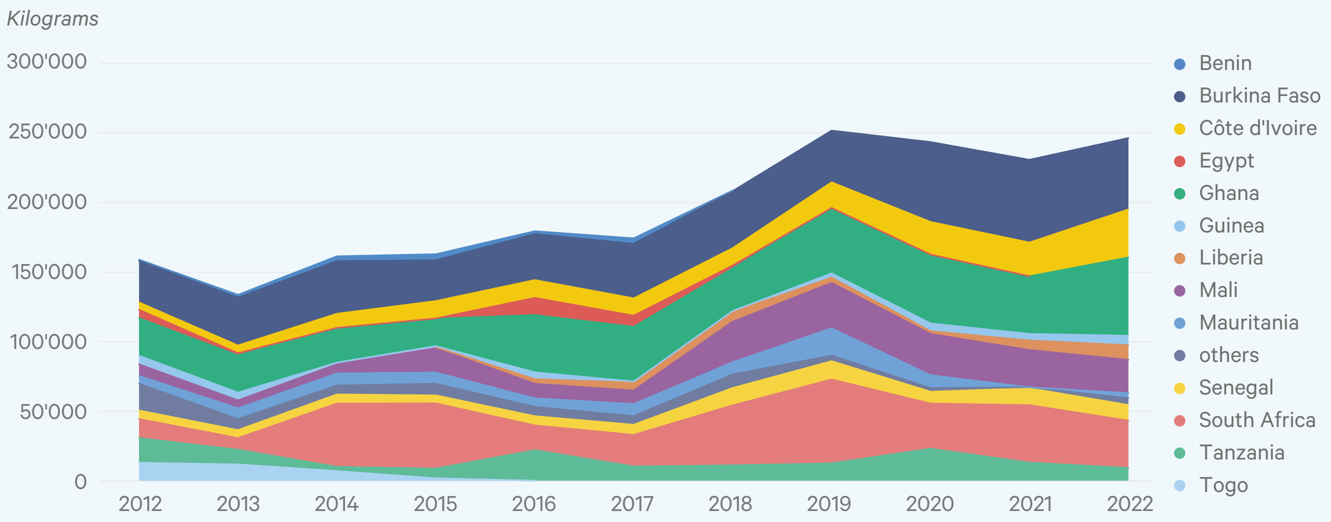
SWITZERLAND

Switzerland is the main hub of the international gold trade. The country is home to five LBMA-certified gold refineries (Argor-Heraeus, Metalor, PX Precinox, MKS PAMP and Valcambi), four of which rank among the world's nine largest gold refineries.[154] In 2022, the Swiss authorities reported gold imports from around the world of 2,410 tonnes (USD 99 billion) in total.[155]

Exports of gold from African countries to Switzerland increased by almost 90 tonnes between 2012 and 2022, from 158 tonnes to 246 tonnes (see Figure 40). During this period, gold exports to Switzerland from several African countries, including Benin and Togo, ceased. In 2022, the largest exporters of gold to Switzerland were Burkina Faso and Ghana.

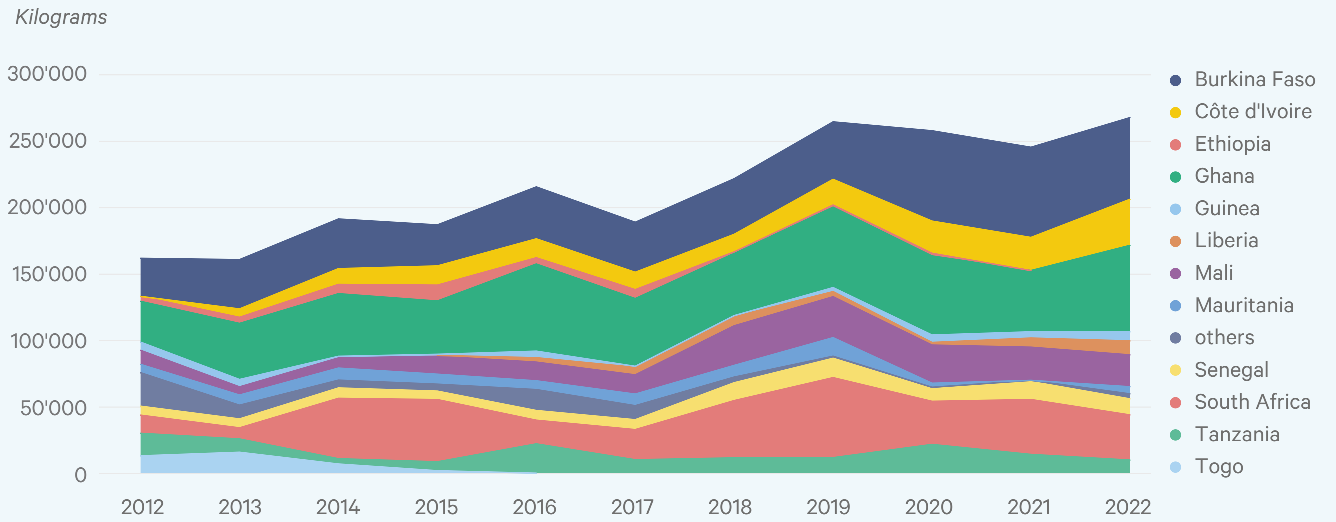
Switzerland is the second-largest importer of African gold after the UAE. Between 2012 and 2022, imports of gold from Africa into Switzerland increased by more than 100 tonnes, from 162 tonnes to 267 tonnes (see Figure 41). This represents 11% of total gold imports into Switzerland in that year. But the percentage could in reality be higher, as it is possible that gold from Africa was imported into Switzerland via third countries, such as the UAE.

FIGURE 40 – Exports of gold from all African countries to Switzerland



Sources: statistics of the African states, see appendix 5.

FIGURE 41 – Imports of gold from all African countries into Switzerland



Sources: UN Comtrade HS 7108, data reported by Switzerland.

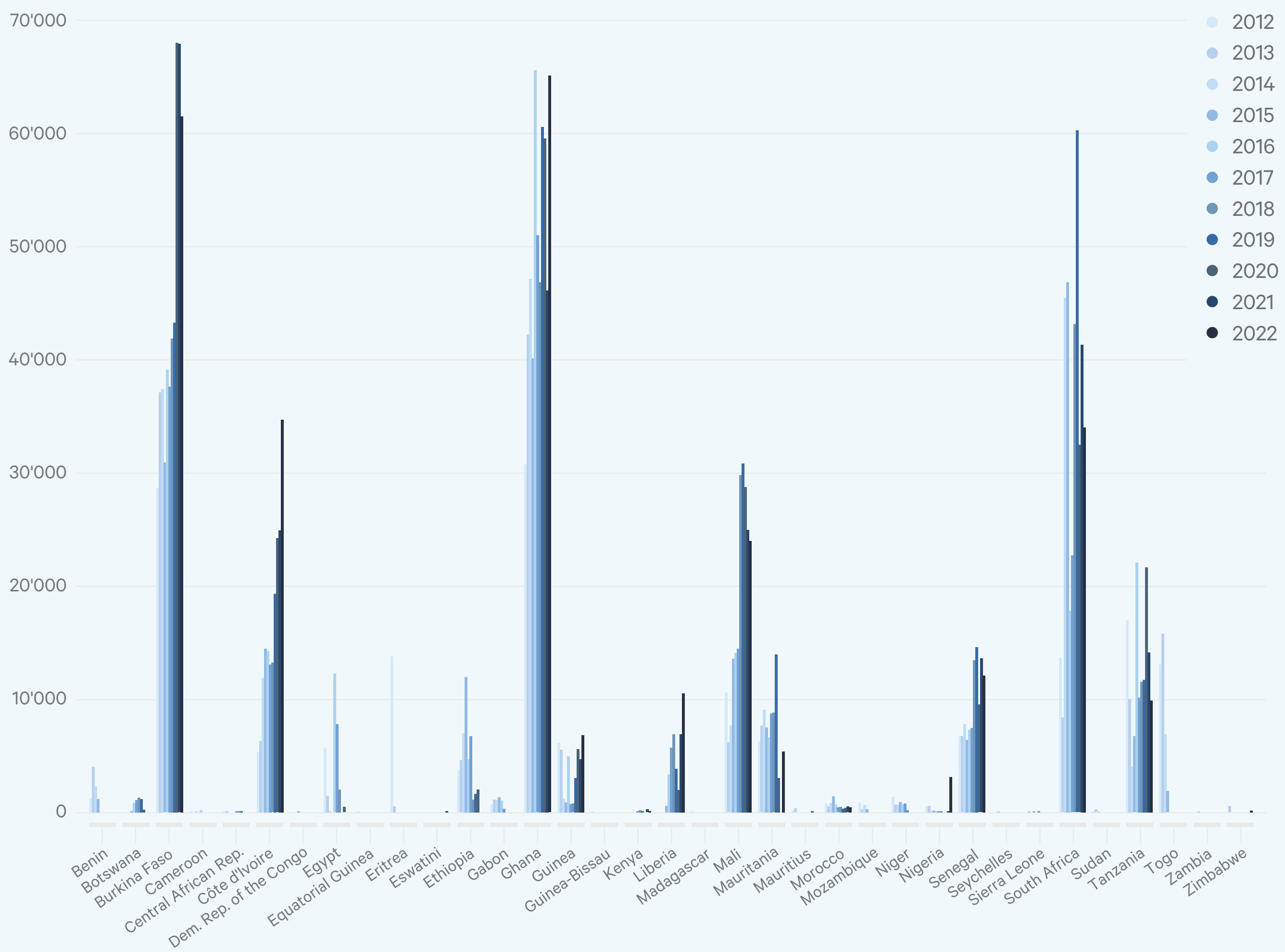
Between 2012 and 2022, imports of gold into Switzerland from countries that are among the main producers of industrial gold in Africa, namely South Africa, Côte d'Ivoire, Burkina Faso, Ghana and Mali, have increased significantly. At the same time, the number of African partner countries has fallen, from 26 in 2012 to 14 in 2022. This is because gold imports from transit countries such as Togo and Benin and gold-producing countries such as Eritrea, Ethiopia, Niger and Gabon have ceased.

Figure 42 shows that large quantities of gold have been imported into Switzerland from a limited number of African countries. In the case of six countries (South Africa, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Tanzania), these quantities exceeded 20 tonnes per year at least once between 2012 and 2022.

Gold bullion production at the Argor-Heraeus refinery in Switzerland.

FIGURE 42 – Imports of gold from all African countries into Switzerland

Kilograms

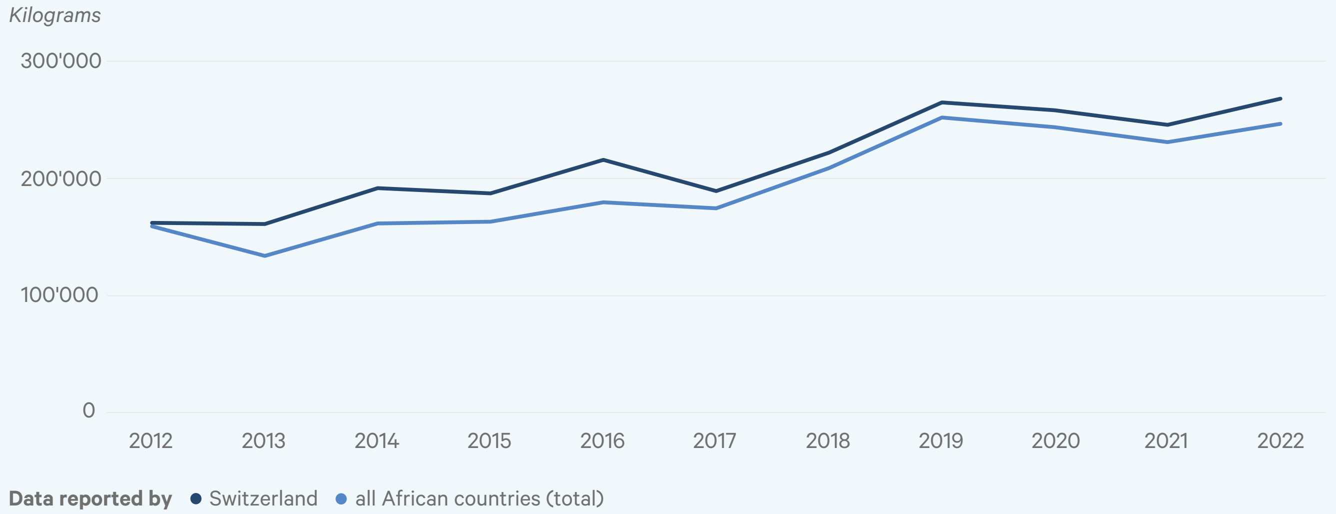


Sources: UN Comtrade HS 7108, data reported by Switzerland.

The gaps between exports of gold from African countries to Switzerland and imports of African gold into Switzerland have narrowed from 2017 onwards (see Figure 43). They ranged between 27 and 36 tonnes in 2013–2016 and between 13 and 15 tonnes in 2017–2021. In 2022, the gap was 21 tonnes. Half of these gaps are linked to gold trade with Ghana.

The discrepancies between exports of gold from Ghana to Switzerland and imports of Ghanaian gold into Switzerland (see Figure 44) do not necessarily correspond to undeclared gold exports. There are several sources of statistics on gold exports from Ghana, and depending on which one is used, the discrepancies may vary considerably or even disappear. The figures from UN Comtrade are higher than those from the Bank of Ghana, but they are marred by errors[156] and are only available up to 2019. Those published by the Ghanaian national chapter of the EITI (GHEITI) in its annual reports are partly higher and partly lower than those of the Bank of Ghana, but are not disaggregated by country of destination, so they do not allow an analysis of Ghana's gold exports to a given country (in this case, Switzerland). In view of the above, SWISSAID had no choice but to base its analysis on the Bank of Ghana's figures, despite their limited reliability.[157]

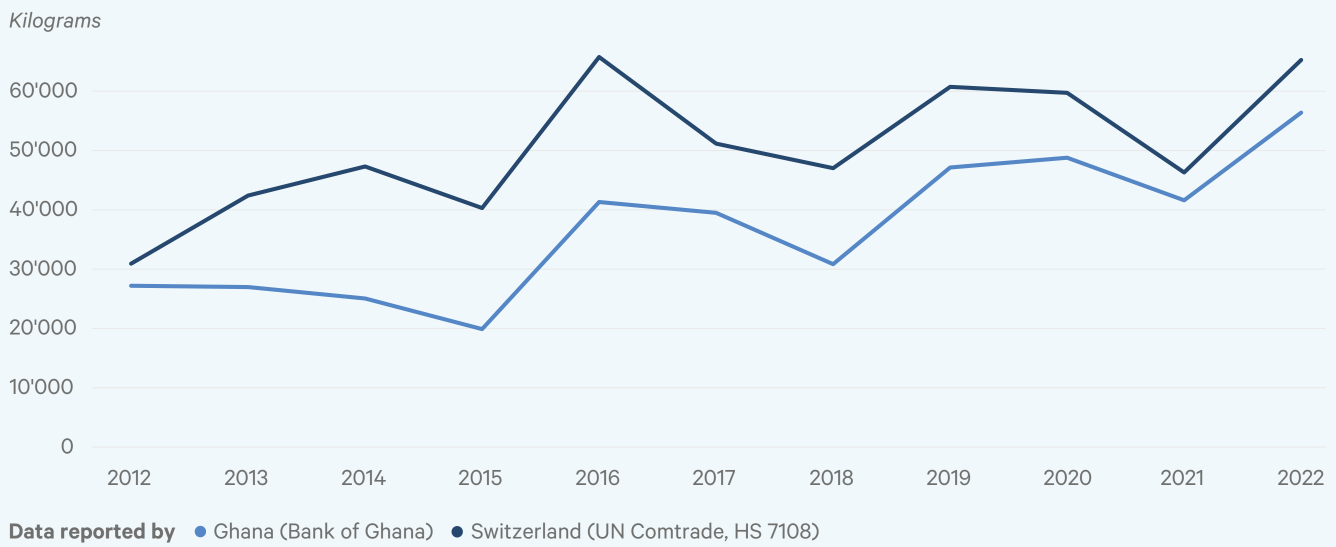
FIGURE 43 – Imports of gold from Africa into Switzerland versus mirror data



SWISSAID has corrected data on imports of gold from South Africa into Switzerland to take into account only shipments that actually left South Africa in the year indicated above.

Sources: Switzerland: UN Comtrade HS 7108. Countries of origin: see appendix 5.

FIGURE 44 – Exports of gold from Ghana to Switzerland



Part of the discrepancy between exports of gold from African countries to Switzerland and imports of African gold into Switzerland also stems from gold trade with Burkina Faso, particularly for the years 2020 to 2022. A detailed analysis of these discrepancies suggests, however, that they most likely do not correspond to undeclared gold exports.[158]

In some cases, the authorities of an African country reported gold exports to Switzerland while the Swiss authorities reported no gold imports, or only very small quantities, from the country in question. This concerns Niger in 2018 (6.1 tonnes versus 0.2 tonnes), Benin in 2016 and 2017 (2 and 4 tonnes versus 0) and Rwanda in 2019 (0.7 tonnes versus 0).[159]

SWISSAID contacted the Swiss authorities for an explanation of these statistical gaps. The Federal Office of Customs and Border Security (FOCBS) replied that "the comparison of national and foreign statistics is always delicate and the differences observed may be the result of many factors."[160]. In particular, the FOCBS mentioned cases where (1) the goods are destined for a customs warehouse in Switzerland, (2) they are imported indirectly into Switzerland via a third country and their origin is not known, (3) an error has occurred (such as the declaration of the country of invoicing instead of the declaration of the country of destination of the goods),[161] and (4) the origin notified to the FOCBS is another country. When asked whether the discrepancies between customs statistics observed could correspond to illegal imports, the FOCBS replied that "differences between the statistics of one country and another do not lead to the conclusion that there has been illegal activity."

SWISSAID also questioned the Nigerien authorities about the statistical discrepancies. According to a representative of the Ministry of Mines of Niger, the most plausible hypothesis is an error: gold exports from Niger to Dubai may have been falsely declared as destined for Switzerland, as Niger's industrial gold has long been destined for that country in the past.[162]

IMPORTS OF AFRICAN GOLD INTO SWITZERLAND VIA THIRD COUNTRIES

Gold imports from Africa into Switzerland between 2012 and 2022 could in reality be higher than the above figures suggest. It is possible that African gold was imported into Switzerland via third countries. In such cases, it is impossible to know in which country the gold was mined, as only the last country in which it was processed is declared to customs as the country of origin.

In an exchange with SWISSAID, a Swiss LBMA-certified refinery admitted importing gold from Egypt via Lebanon between 2012 and 2022. As this gold had been melted down in Lebanon, the refinery indicated Lebanon as the country of origin in its declarations to Swiss customs and the LBMA.[163] It is possible that the same phenomenon occurred in the case of gold imports from the UAE into Switzerland, but on a much larger scale, as these imports reached between 84 tonnes and 373 tonnes per year between 2016 and 2022.[164]

Sourcing gold from the UAE is notoriously risky. Several reports, including one published by SWISSAID in 2020, have documented business relationships between Swiss refineries and Dubai suppliers sourcing dubious gold from African countries.[165] In 2021, the Swiss authorities warned Swiss refineries of the risks involved in sourcing gold from the UAE.[166] In 2022, the UAE's Financial Intelligence Unit acknowledged that gold from conflict zones or high-risk areas "enters the country and is further [...] processed and re-exported to Western European countries."[167] Finally, the Swiss Association of Manufacturers and Traders in Precious Metals (ASFCMP), an umbrella organisation for most Swiss refineries, explicitly states on its website that "if companies are unable to accurately trace the origin of gold passing, for example, via Dubai," they should refrain from purchasing it.[168] In recent years, the vast majority of gold imported into Switzerland from the UAE has been imported by the Valcambi refinery. Since October 2023, Valcambi is no longer a member of the ASFCMP.[169]

Types of African gold imported into Switzerland
There are two sources for finding out the type of gold imported into Switzerland: the LBMA's Responsible Sourcing Reports (available for 2018–2021), which bring together data on the origin of gold processed by the five LBMA-certified Swiss refineries,[170] and Swiss-Impex, the Swiss Customs database, which contains data on gold imports into Switzerland disaggregated by type of gold (from 2021).[171] The LBMA data distinguishes between industrial and artisanal gold, unlike the Swiss customs data.

Switzerland's imports of African gold consist mainly of mined gold (87.2% in 2022).[172] And almost all the gold imported directly from Africa by the five Swiss LBMA refineries comes from industrial mines (99% in 2021). Between 2018 and 2021, these refineries imported between 148 tonnes and 177 tonnes of fine gold per year from African industrial gold mines.[173] SWISSAID documented the business relationships between these refineries and these mines in a report published in 2023.[174]

The quantities of ASM gold imported directly from Africa into Switzerland are tiny. Between 2018 and 2020, Swiss LBMA refineries imported ASM gold from Guinea (62 kg), Kenya (37 kg) and Ethiopia (3,142 kg).[175] The Argor-Heraeus refinery confirmed to SWISSAID that the Ethiopian gold came from the National Bank of Ethiopia, the country's central bank (the refinery stopped these supplies in 2020).[176] In 2021, no Swiss LBMA refinery reported importing any gold of this type.[177] The MKS PAMP refinery has been sourcing ASM gold from the Bank of Ghana, the country's central bank, since 2022.[178] Non-LBMA refineries and Swiss trading companies have also imported small quantities of ASM gold from Africa in recent years. The SAR Recycling refinery, for example, imported gold from CAR in 2019.[179]

"Swiss legislation on gold trading has many shortcomings."

Regarding "recycled" (reprocessed) gold, the Swiss LBMA refineries have declared that they imported gold of this type from South Africa,[180] Egypt[181] and Morocco[182] between 2018 and 2021. The quantities imported from South Africa in 2018 (36,127 kg) and 2019 (49,417 kg) raise questions, as they are significantly higher than the local legitimate scrap gold market, estimated by Rand Refinery at between 2 and 5 tonnes per year.[183] As for monetary gold, the vast majority was imported from South Africa and less than 200 kg per year from Morocco, Senegal and Zimbabwe. Some of this gold was imported by Swiss refineries (key 912),[184] and some by banks and trading companies (key 913).[185]

Comparison with LBMA data
SWISSAID compared Swiss customs statistics with those of the LBMA. Such a comparison is possible because the five Swiss LBMA refineries all report their data by calendar year. However, it should be borne in mind that the refineries report fine gold weights to the LBMA[186] whereas they report raw gold weights to Swiss customs.[187] In theory, the figures published by the LBMA should not be higher than those published by Swiss customs. However, SWISSAID discovered that several of them were. These include figures on gold imports from Botswana (in 2018 and 2019),[188] DRC (2019)[189] and Egypt (2018 and 2019).[190] In the case of Botswana, SWISSAID discovered that the problem was due to an error in the figures sent by the Metalor refinery to the LBMA. In the case of the DRC, the organisation discovered that an error had been made by the LBMA when publishing the data. Finally, in the case of Egypt, SWISSAID was unable to identify the source of the problem and the LBMA was unable to provide an explanation for the discrepancies.[191]

The comparison of these data also allowed SWISSAID to identify errors in the figures for gold imports from Niger in 2018. Metalor, which is responsible for these imports, did not report these flows to the LBMA. When questioned by SWISSAID, the refinery acknowledged this error and explained that it was "linked to a data entry error (human error). As 2018 was the first year of reporting, the tools available were not designed for reporting, but for invoicing." Metalor added that "the tools have since been reworked to lend themselves to accurate reporting.[192]

FIGURE 45 – Examples of erroneous data on gold imports into Switzerland

Year	Tariff code	Country of origin	Country of dispatch	Weight (kg)	Value (CHF)
2020	7108	Côte d'Ivoire	Mali	1'160	60'786'348
2018	7108	Northern Macedonia	Mali	72	3'037'137
2019	7108	Saudi Arabia	Mali	590	24'206'535
2018	7108	Singapore	Senegal	60	2'225'785
2019	7108	Singapore	Senegal	94	3'658'386

Errors in customs declarations

The FOCBS provided SWISSAID with the countries of origin and the countries of dispatch of gold imported into Switzerland between 2012 and 2022.[193] **In several cases, the country of origin or the country of dispatch, or even both, were incorrectly declared.** Figure 45 shows examples of gold imports into Switzerland for which the refineries involved acknowledged that errors had been made.[194] Incorrect declarations are not necessarily intentional, but they can be, particularly when an importer declares a false country of origin to disguise the real origin of the gold. In any case, the existence of incorrect information in Swiss customs statistics highlights the inadequacy of the controls carried out by Swiss customs.

Regulation of gold trading in Switzerland

Swiss legislation on gold trading has many shortcomings. In a report on gold published in 2018, the Federal Council acknowledges that the due diligence owed by refineries under Swiss law is very limited.[195] The Swiss executive explains that the Precious Metals Control Act (PMCA) "does not expressly regulate the duty of due diligence relating to the provenance of gold" and that the Precious Metals Control Ordinance (PMCO) is limited to ensuring that the gold processed "is not stolen or of illicit provenance." It also specifies that the due diligence defined in the PMCO does not apply "to the conditions under which the gold was produced" and therefore does not cover human rights violations or environmental damage. In its report, the Federal Council states that it is "aware that there is a risk of illegally mined gold being imported into Switzerland, with the possible human rights violations that this represents." It acknowledges that "it may in principle be legal, even if not appropriate, for a Swiss refinery to source gold from production that does not respect social and environmental minima, provided that such production is considered legal in the country of production."

In a report published in 2020, the Swiss Federal Audit Office highlighted the "shortcomings of the current supervisory system" for trade in precious metals in Switzerland.[196]

The adoption in 2021 of the Ordinance on Due Diligence Obligations and Transparency Regarding Minerals and Metals from Conflict Areas and Child Labour (DDTrO)[197] did not change the situation. On the other hand, it has created some confusion, as the scope of the due diligence for gold refineries, the monitoring of its implementation by the authorities and the penalties for non-compliance are different under the PMCO and the DDTrO. The PMCO requires gold refineries to perform due diligence only on the legality of the goods and only up to the first supplier. It also allows the Central Office for Precious Metals Control (COPMC) to carry out checks on refiners and impose sanctions in the event of non-compliance with the rules in force. The DDTrO, on the other hand, requires due diligence extending to respect for human rights and based on the OECD Guidance, but does not provide for any controls by the COPMC and no sanctions in the event of non-compliance. It therefore does not strengthen refineries' due diligence but gives the illusion that Swiss legislation is based on the OECD Guidance.

In January 2023, the FOCBS published a Guideline relating to the application of the PMCA.[198] This text only makes recommendations and is therefore not binding. However, it signals the FOCBS's determination that Swiss refineries should comply with OECD requirements and exercise due diligence throughout their supply chains. One of the FDFO's recommendations is "the creation of a five-level internal control system based on the OECD guidelines."[199]

In a letter sent to the Swiss authorities in March 2023,[200] several UN Special Rapporteurs stated that

A customs officer at Zurich International Airport, Switzerland

they were "concerned that Switzerland does not have an adequate traceability system that would require Swiss refineries to know where the gold was mined and how it was mined. The traceability requirements currently applied in Switzerland stop at the country of export of the gold to Switzerland, which is often an intermediate country." The UN representatives also stated that they were "concerned that current legislation is not adequate to prevent the import of gold produced in a manner that violates human rights" and that this legislation "does not establish standards of due diligence equivalent to those of the OECD [...]."

"Switzerland does not have an adequate traceability system that would require Swiss refineries to know where the gold was mined and how it was mined."

In response to the letter from the UN Special Rapporteurs, the Federal Council stated that "as part of the total revision of customs law [...] it is planned to further strengthen the Precious Metals Control Act. It is planned to create a formal legal basis so that the Federal Council can comply with international standards when defining the duties of care of precious metal smelters. Specifically, the OECD guidelines are to be incorporated into binding law at ordinance level."[201] It remains to be seen whether the Swiss parliament will accept such changes.

Even the Swiss refineries have repeated on several occasions via the ASFCMP that they want the PMCA to be strengthened, which is testimony to the necessity of improving the legal framework. As part of the consultation on the total revision of customs law (which includes the PMCA), the ASFCMP welcomed "the desire for greater control over the trade and import of melted products," and "the desire to keep precious metals of illegal or proscribed origin off the Swiss market."[202]

INDIA

India is one of the world's largest consumers of gold. In 2022, the country imported 713 tonnes of gold (USD 36 billion) from all over the world.[203] It is home to some refineries, including MMTC-PAMP, the only refinery in the country to be certified to the LBMA standard.

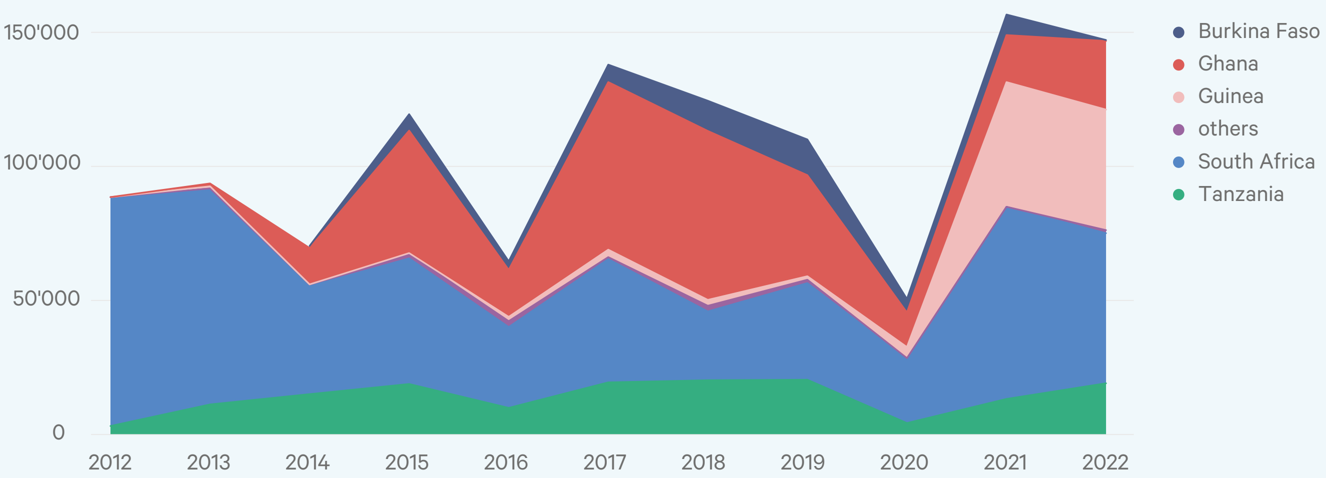
The quantities of gold imported into India from Africa fluctuated widely between 2012 and 2022 (see Figure 47). For example, from a low of 66 tonnes in 2020 (due mainly to the health crisis triggered by the COVID-19 pandemic, which had a major impact in India), they rebounded to a peak of 177 tonnes in 2021. Generally speaking, the trend is very similar to those for gold exports to India reported by African countries (see Figure 46).

In 2022, imports of African gold into India represented 22.7% of the country's total gold imports.

African gold may have been imported into India via transit countries, in particular the UAE. Between 2016 and 2022, imports of gold from the UAE into India ranged from 42 tonnes to 120 tonnes per year.[204]

FIGURE 46 – Exports of gold from all African countries to India

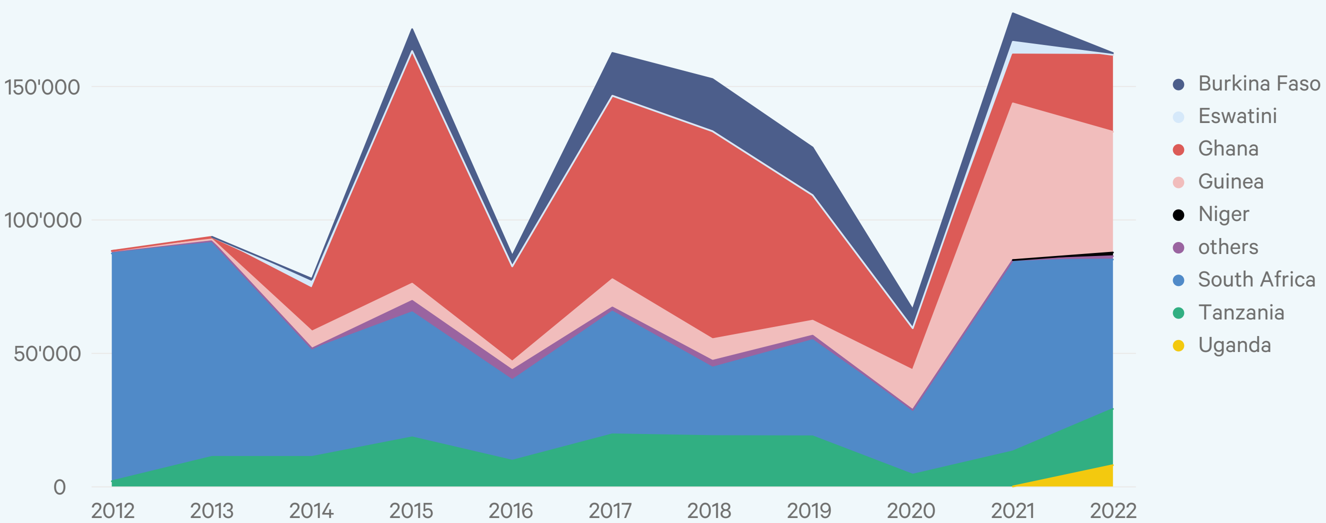
Kilograms



Sources: statistics of the African states, see appendix 5.

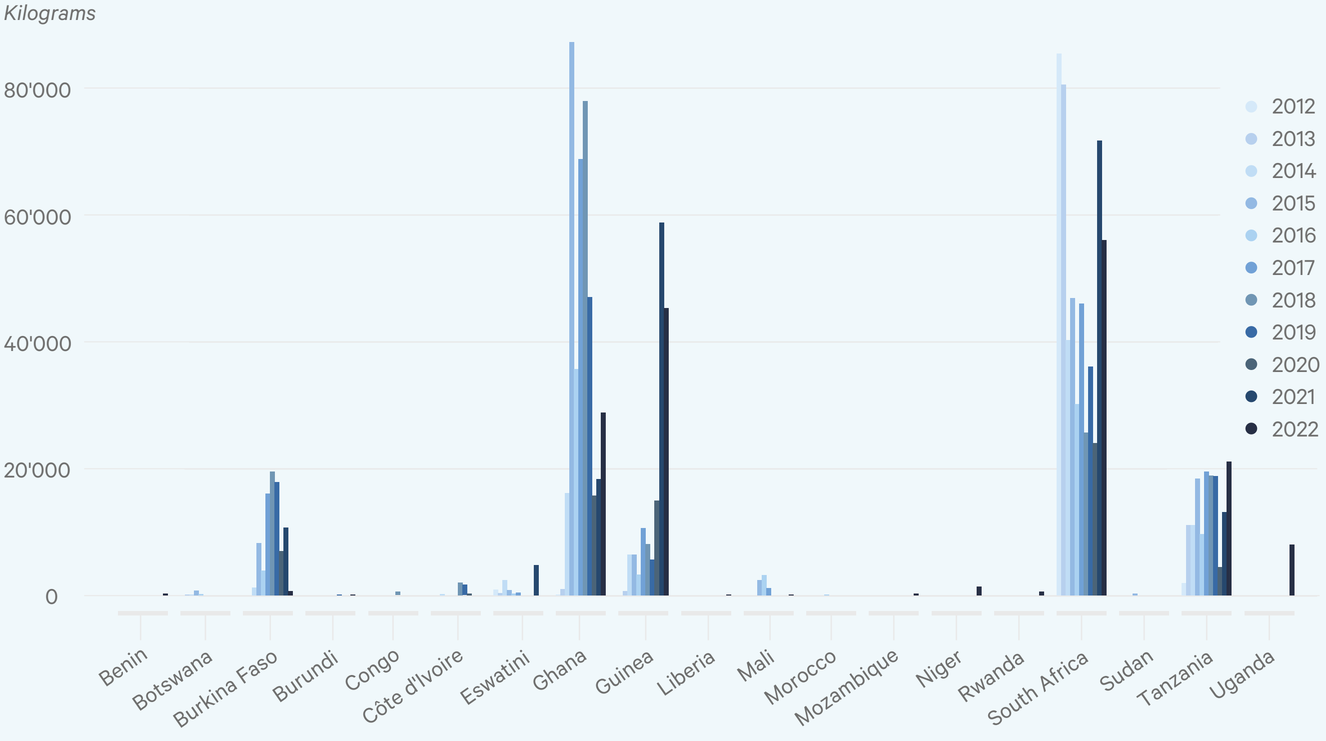
FIGURE 47 – Imports of gold from all African countries into India

Kilograms



Sources: UN Comtrade HS 7108, data reported by India.

FIGURE 48 – Imports of gold from all African countries into India

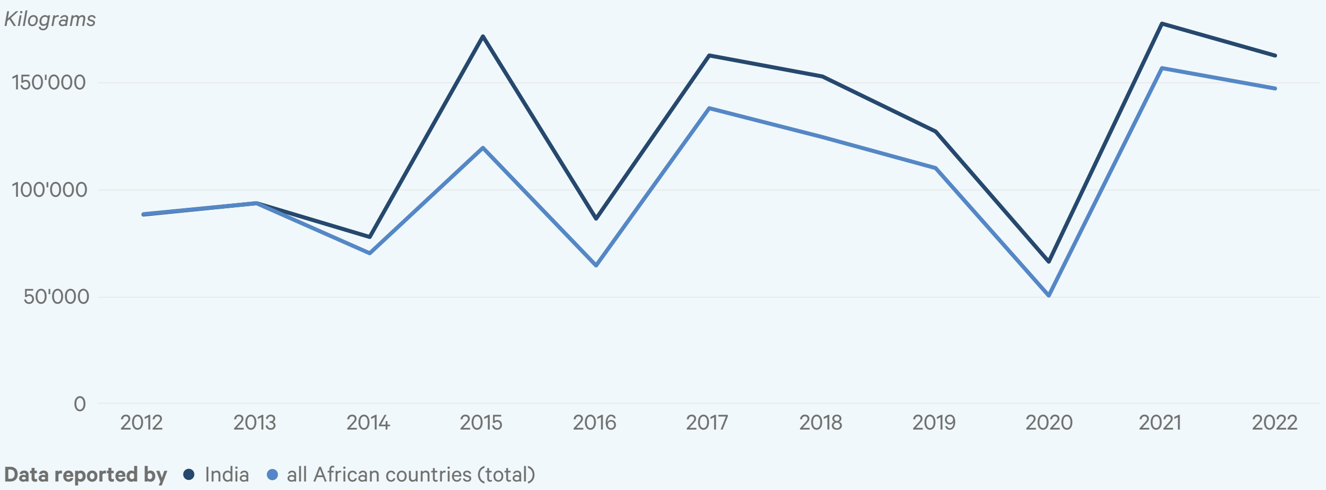


Sources: UN Comtrade HS 7108, data reported by India.

As Figures 47 and 48 show, imports of African gold into India over the period 2012–2022 came primarily from South Africa, Burkina Faso, Ghana, Guinea and Tanzania.

The gaps between gold exports from African countries to India and gold imports into India from these countries have varied between 2012 and 2022 (see Figure 49). For example, the 2013 gap was almost zero, the 2015 gap was 52 tonnes and the 2022 gap was 15 tonnes. Detailed analysis of the data shows that the gaps can largely be attributed to gold imports into India from Ghana and, to a lesser extent, Burkina Faso and Guinea. For example, 80% of the 2015 gap is explained by gold imports from Ghana.

FIGURE 49 – Imports of gold from Africa into India versus mirror data



Sources: India: UN Comtrade HS 7108. Countries of origin: statistics of the African states, see appendix 5.

The discrepancies between Ghana's gold exports to India and the mirror data suggest that some of this gold is being smuggled out of Ghana. That said, there are several sources of statistics on Ghana's gold exports and, depending on which one is used, the discrepancies vary considerably.[205] For example, in 2015, UN Comtrade reports that 64.7 tonnes of gold was exported from Ghana to India, while the Bank of Ghana reports exports to India of only 45.7 tonnes. UN Comtrade's figures are therefore higher than those of the Bank of Ghana. However, they are marred by errors[206] and are only available until 2019. SWISSAID has therefore had to base its analysis on the Bank of Ghana's figures, even though they are not entirely reliable.[207]

The discrepancies between Burkina Faso's gold exports to India and the mirror data[208] are most likely the result of errors made by the Burkina Faso authorities.[209] Finally, there is every reason to believe that the discrepancies between Guinea's gold exports to India and the mirror data, particularly those for 2021 (10.8 tonnes) and 2022 (12 tonnes), correspond to undeclared gold exports

Types of African gold imported into India
It is difficult to know exactly what types of gold are imported into India. Every year since 2020, the LBMA has published in its Responsible Sourcing Reports data disaggregated by type of gold on supplies from refineries certified to its standard.[210] However, it aggregates this data by region when fewer than four member refineries are based in the same country. As MMTC-PAMP is the only LBMA refinery to be based in India, its supply data feeds into the "Asia & Australia" category and is not separately identifiable. Indian customs statistics also contain no indication, in particular no tariff sub-code, of the type of gold imported. However, some observations can be made by cross-referencing LBMA data with Indian customs data.

LBMA refineries based in "Asia & Australia" imported 62 tonnes of gold from Africa in 2018, 54.5 tonnes in 2019, 42 tonnes in 2020 and 57 tonnes in 2021.[211] Except for a small amount of "recycled" gold (0.03 tonnes in 2020 and 7.4 tonnes in 2021) and a tiny amount of artisanal gold (0.01 tonnes in 2021), all this gold was industrial gold. In 2022, MMTC-PAMP stated that it had not processed any gold from ASM and that it had only sourced "recycled" gold from India.[212]

Gold imported into India from African industrial gold mines has been processed (almost) exclusively by MMTC-PAMP. In recent years, this refinery has imported gold of this type from Burkina Faso, Guinea, Côte d'Ivoire, Ghana and Tanzania. SWISSAID documented the business relationships between industrial gold mines in these countries and this refinery in a report published in 2023.[213]

Based on a detailed analysis of Indian customs statistics and the gold sectors of the African countries concerned, SWISSAID can put forward that: (1) African ASM gold imported into India in recent years has mainly come from Ghana, Guinea and, to a lesser extent, Tanzania. (2) Gold imports into India from Niger, Uganda and Rwanda were most likely made up exclusively of ASM gold. (3) Gold imports into India from Burkina Faso and Côte d'Ivoire contained only small quantities of ASM gold (at least between 2018 and 2020).[214]

It is difficult to estimate the quantities of reprocessed ("recycled") and monetary gold imported into India from South Africa between 2012 and 2022, as the Indian authorities have refused to share with SWISSAID their statistics on gold imports disaggregated by country of shipment. The detailed Indian statistics consulted by SWISSAID relate to the years 2018–2020 and show that much of the gold declared as coming from South Africa was monetary gold that had not been imported directly from South Africa, but from other countries, such as the United Kingdom.

Legislation in India
Several organisations, including the India Gold Policy Centre[215] and the Canadian NGO Impact,[216] have pointed to the fact that smuggled gold is being imported into India and have highlighted the problems posed by Indian legislation on the trade in yellow metal. It is estimated that between 200 and 300 tonnes of gold are smuggled into India each year by air, land and sea.[217]

Since 2013, customs duties levied on imports of mined gold have been lower than those levied on refined gold (in 2022, the difference was 0.66%).[218] This particularity of the Indian legal framework has led to a sharp increase in the number of licensed refineries in India (from less than 5 in 2013 to 40 in 2022[219]) and in the quantities of mined gold imported into the country (from 50 tonnes in 2013 to 276 tonnes in 2018[220]). The Indian government has introduced guidelines[221] requiring companies to ensure that the gold they import comes directly from the country where it was mined. However, despite the entry into force of the Indian Good Delivery Standards and the anti-money laundering directive specific to the precious metals sector,[222] **there is still no legislation in India aligned with the OECD Guidance**. As a result, there is no requirement for refineries to undergo external audits.

OTHER COUNTRIES

The UAE, Switzerland and India are not the only countries into which gold from Africa has been imported between 2012 and 2022; other countries including Turkey, Canada, Australia, Lebanon and China have also been destinations for gold exported from Africa during this period. However, as the quantities are much smaller, SWISSAID has limited its analysis to the essentials regarding these countries.

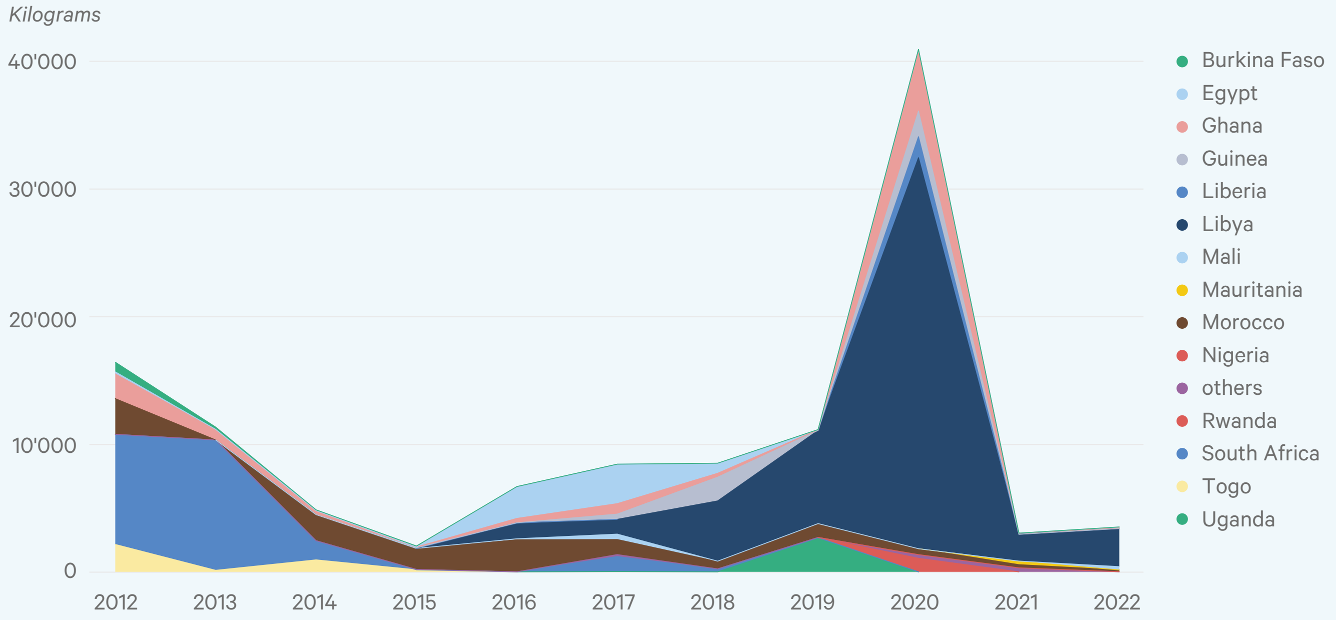
Turkey

Turkey is an increasingly important player in the global gold sector. It is home to two LBMA-certified refineries and a major gold market, in particular the Kuyumcukent complex, whose name means "city of jewellers."[223] In 2022, Turkey imported 379.3 tonnes of gold (USD 20.4 billion) from all over the world.[224]

The quantities of African gold imported into Turkey between 2012 and 2022 were below 10 tonnes in most years (see Figure 51). The most notable exception was 2020, when a peak of 41.5 tonnes was reached. African gold imported into Turkey during the period under review came mainly from Libya, South Africa, Morocco, Egypt and Mauritania. This is borne out by what these countries exported to Turkey (see Figure 50).

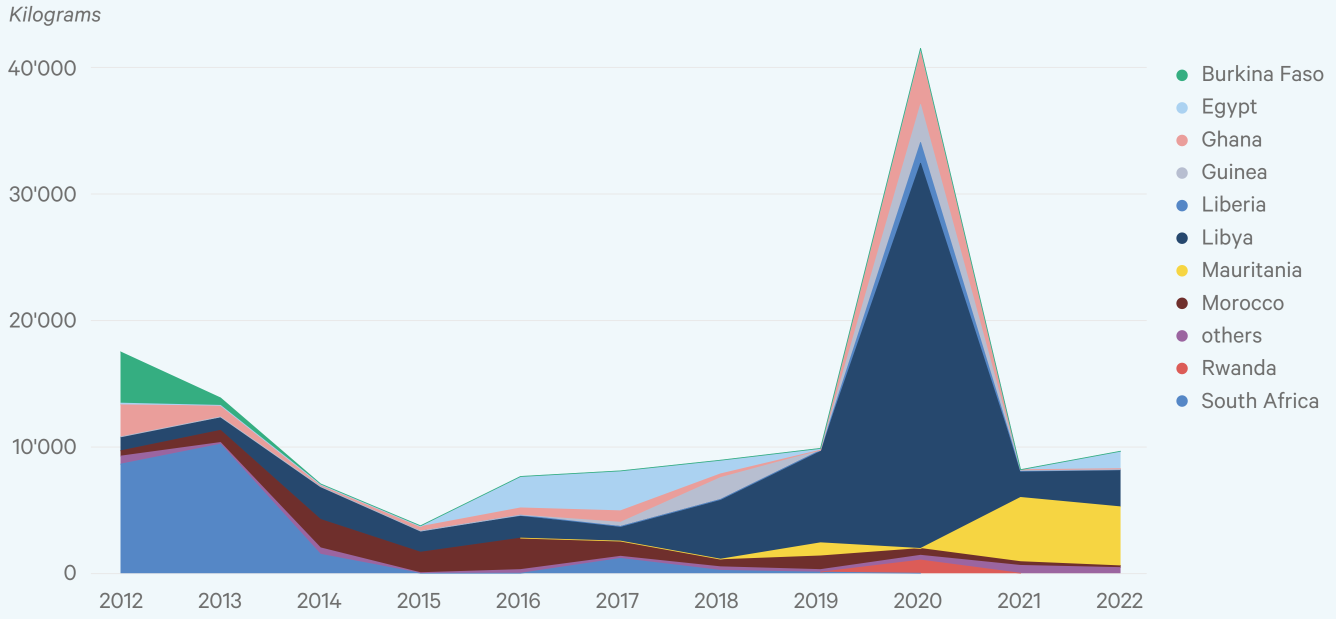
The peak in 2020 was due to gold imports from Libya. Although there is virtually no discrepancy between the figures reported by the Libyan authorities and those reported by the Turkish authorities for several recent years, there is every reason to believe that the majority of this gold is smuggled. Indeed, several reports indicate that the gold exported from Libya is ASM gold from other African countries that has been smuggled into Libya.[225] Some of this trafficking in yellow metal is said to be used to finance the activities of the military leader of eastern Libya, Khalifa Haftar.[226] According to some sources, smuggled gold exports from Libya to Turkey reached more than 8.5 tonnes in 2023.[227]

FIGURE 50 – Exports of gold from all African countries to Turkey



Sources: statistics of the African states, see appendix 5.

FIGURE 51 – Imports of gold from all African countries into Turkey

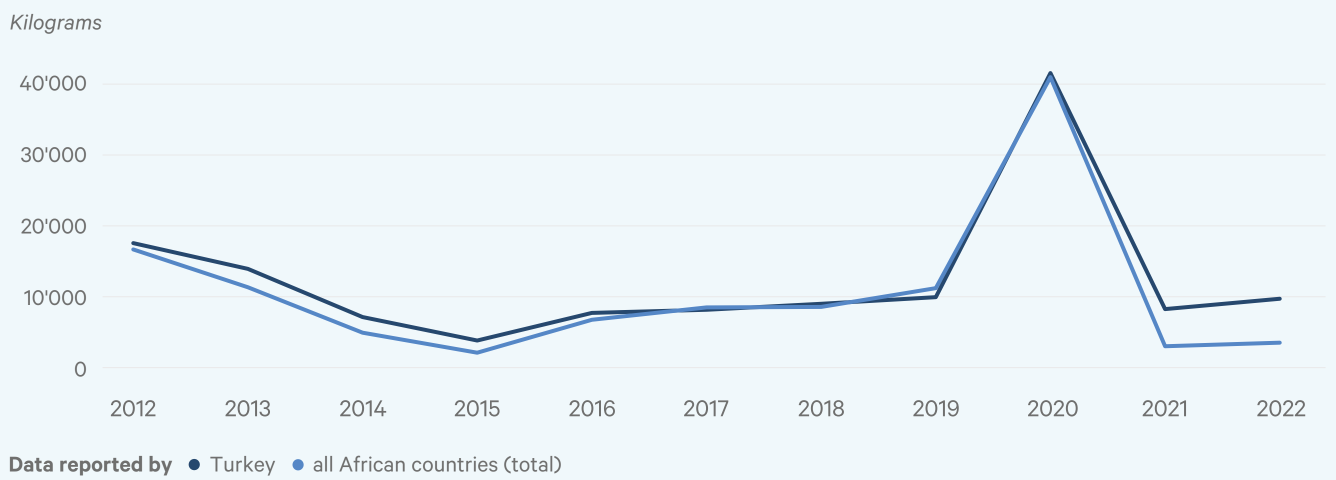


Sources: UN Comtrade HS 7108, data reported by Turkey.

The gaps between gold exports from African countries to Turkey and gold imports from Africa into Turkey are small (see Figure 52). For the years 2021 and 2022, they are largely due to the fact that the Turkish authorities reported gold imports from Mauritania of 5 tonnes in 2021 and 4.6 tonnes in 2022, while their Mauritanian counterparts reported no gold exports to Turkey. The absence of data on the Mauritanian side is not necessarily due to illicit flows; it could be because the Central Bank of Mauritania has not reported its exports.

In 2021, the Financial Action Task Force (FATF) placed Turkey on its grey list due to the lack of effectiveness of the measures taken by the Turkish authorities to combat money laundering and terrorist financing.[228] In a report dated 2019, the FATF had already raised shortcomings in the application of these measures by gold dealers.[229] Moreover, the quantities of gold smuggled into Turkey have recently increased, in particular because of import limits imposed by the government.[230]

FIGURE 52 – Imports of gold from Africa into Turkey versus mirror data



SWISSAID has corrected data on imports of gold from South Africa to take into account only shipments that actually left the country in the year indicated above. However, this could only be done for 2013-2022 because data for previous years is not available.

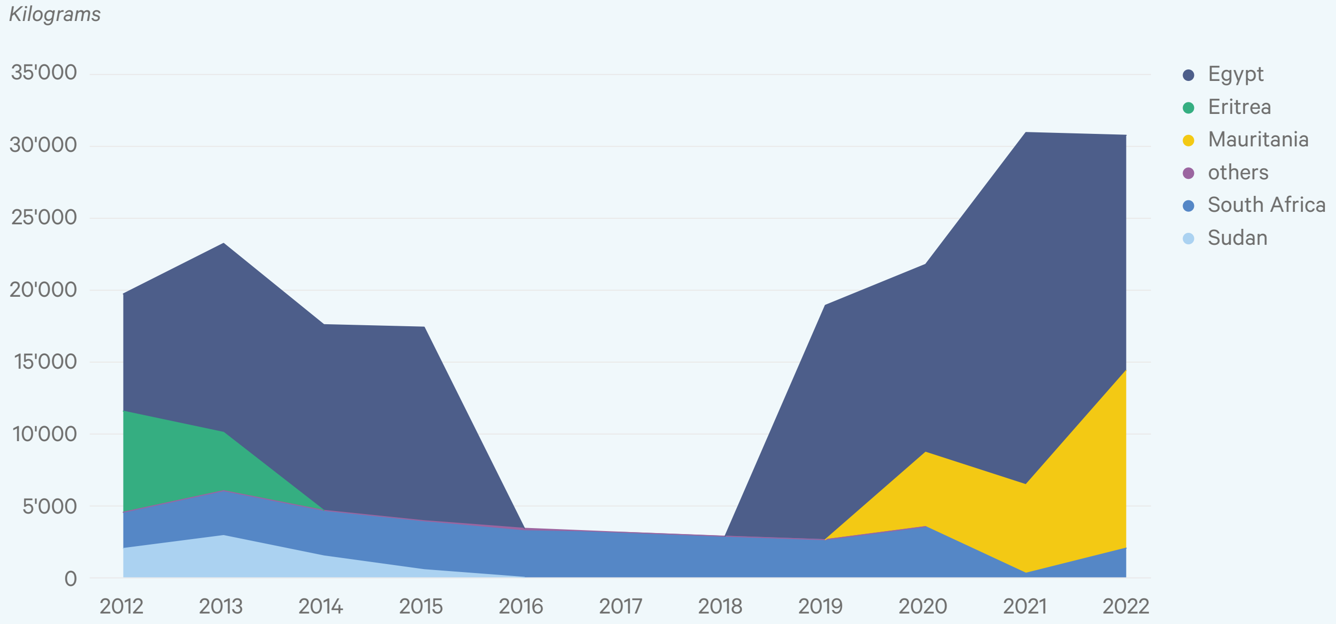
Sources: Turkey: UN Comtrade HS 7108. Countries of origin: statistics of the African states, see appendix 5.

Canada

Gold imports from Africa to Canada fluctuated slightly between 2012 and 2022 (see Figure 54). They reached a low of 18.4 tonnes in 2015 and a high of 29.8 tonnes in 2020. Egypt has been the main country of origin of African gold imported into Canada. This is primarily because the Canadian refinery Ashahi Refining Canada has been sourcing gold from Sukari, an Egyptian industrial gold mine, for all these years.[231] Gold imports from Eritrea and Sudan to Canada were halted in the mid-2010s; those from Mauritania began in 2020.

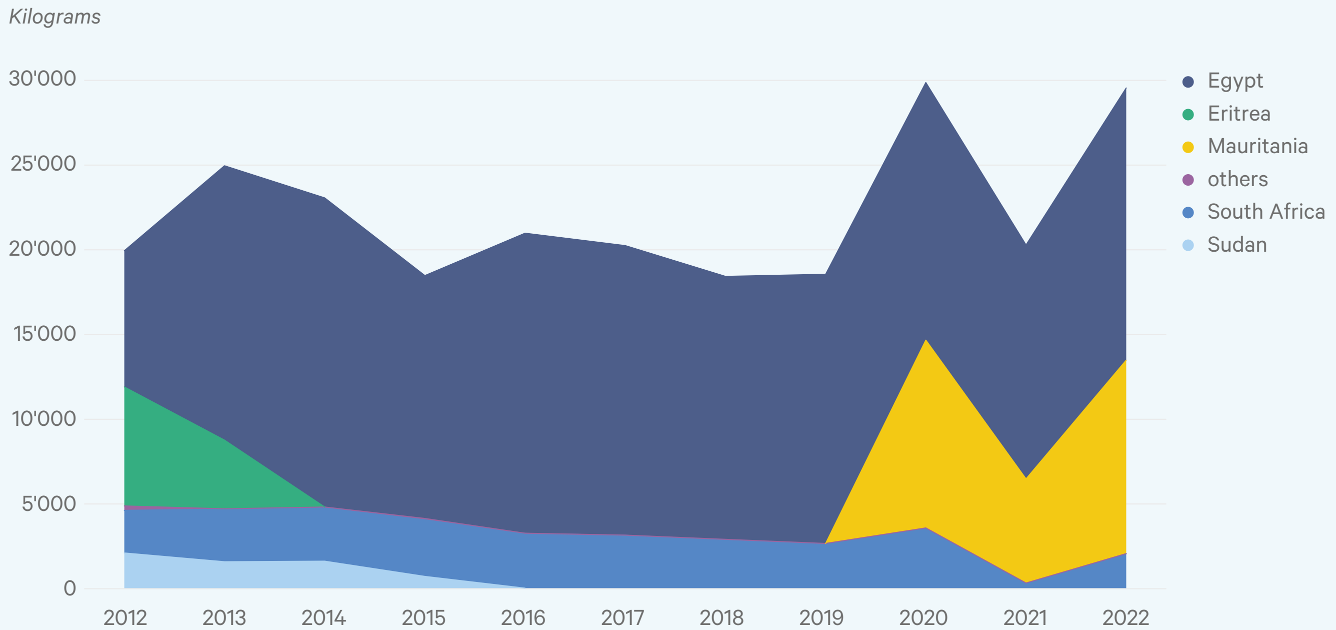
By 2022, most, if not all, of the gold imported into Canada from Africa came from industrial mines.

FIGURE 53 – Exports of gold from all African countries to Canada



Sources: statistics of the African states, see appendix 5.

FIGURE 54 – Imports of gold from all African countries into Canada



Sources: UN Comtrade HS 7108, data reported by Canada.

FIGURE 55 – Imports of gold from Africa into Canada versus mirror data

SWISSAID has corrected data on imports of gold from South Africa to take into account only shipments that actually left the country in the year indicated above. Because of limited data availability, however, this could only be done for 2015-2022.

Sources: Canada: UN Comtrade HS 7108. Countries of origin: statistics of the African states, see appendix 5.

The gaps between gold exports from Africa to Canada and gold imports into Canada from Africa are very large for the years 2016–2018 (see Figure 55). As shown in Figure 53, Egyptian authorities reported no gold exports to Canada for those years. When asked about this, a representative of the Asahi Refining Canada refinery, which imported large quantities of gold from Egypt during the same period, replied: “I don’t know why it wasn’t reported by Egyptian Customs but I can assure you everything was legal and totally above board.”[232] A detailed analysis of Egyptian gold export statistics, provided to SWISSAID by the Central Agency for Public Mobilization and Statistics (CAPMAS), shows that between 2016 and 2018, the Egyptian authorities reported gold exports to the UAE far in excess of gold imports from Egypt reported by their Emirati counterparts. It is therefore likely that the discrepancy between the Canadian data and its mirror image is the result of an error in Egypt’s customs declarations, more specifically an erroneous indication of the country of destination. The 2021 discrepancy could also be the result of an error on the Egyptian side. The Egyptian authorities reported gold exports to Canada of 24.5 tonnes that year, while their Canadian counterparts reported gold imports from Egypt of only 13.8 tonnes.

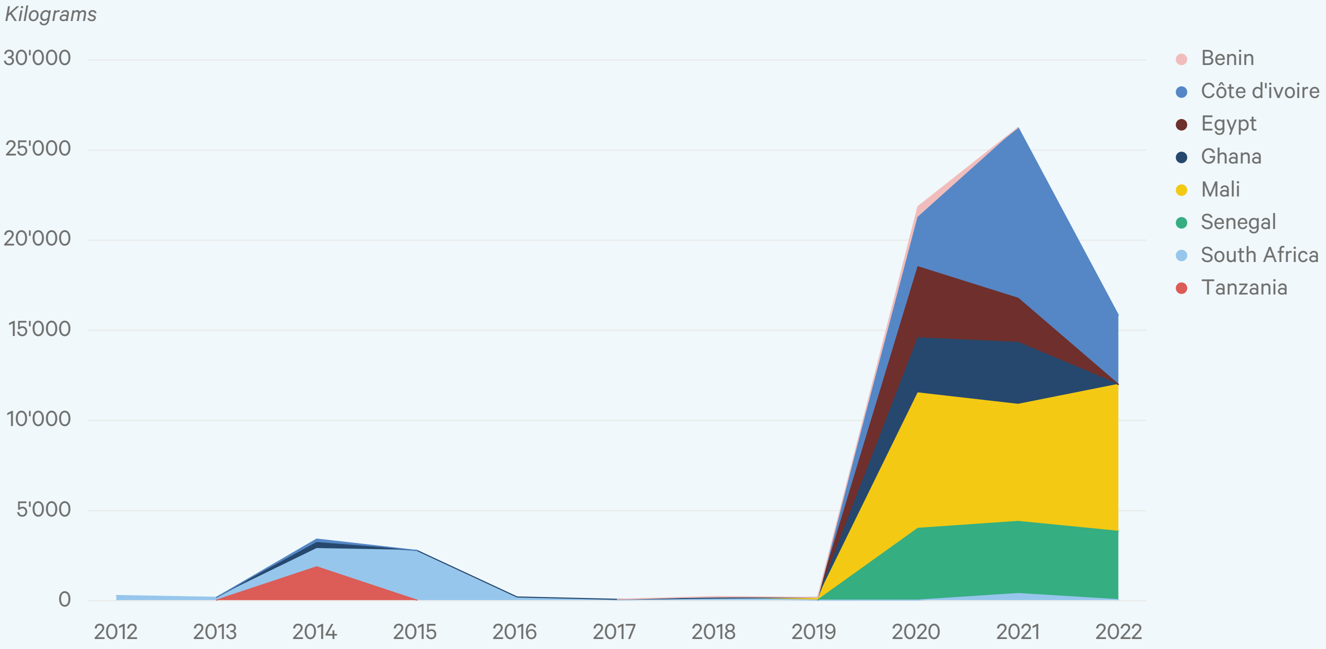
Finally, the 2020 discrepancy can be explained above all by the fact that 6 tonnes of gold that had been declared for import into Canada as originating in Mauritania was not declared for export to that country. This seems to be the result of an error by the Mauritanian authorities, who appear to have reported Switzerland instead of Canada as the country of destination.

In short, a summary analysis of the gold trade between Africa and Canada indicates that there is no reason to suspect illicit flows.

Australia

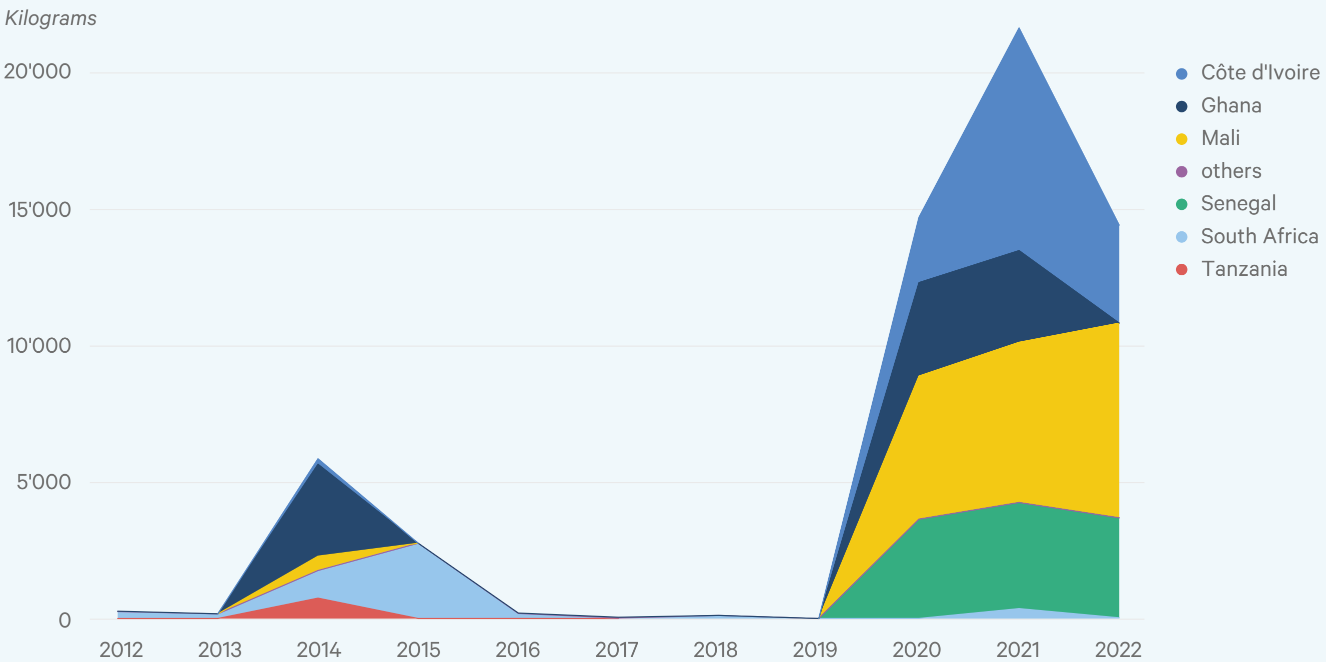
Imports of African gold into Australia remained very low until 2020, except for 2014 and, to a lesser extent, 2015 (see Figure 57). During the COVID-19 pandemic, the Australian refinery The Perth Mint was approached by Australian mining companies to refine gold from their African mines.[233] The refinery's business relationships with African industrial gold mines (Côte d'Ivoire, Ghana, Mali and Senegal) were documented in a previous SWISSAID report[234] (see also Figure 56).

FIGURE 56 – Exports of gold from all African countries to Australia



Sources: statistics of the African states, see appendix 5.

FIGURE 57 – Imports of gold from all African countries into Australia



Sources: UN Comtrade HS 7108, data reported by Australia.

In 2022, most, if not all, of the gold imported into Australia from Africa came from industrial mines.

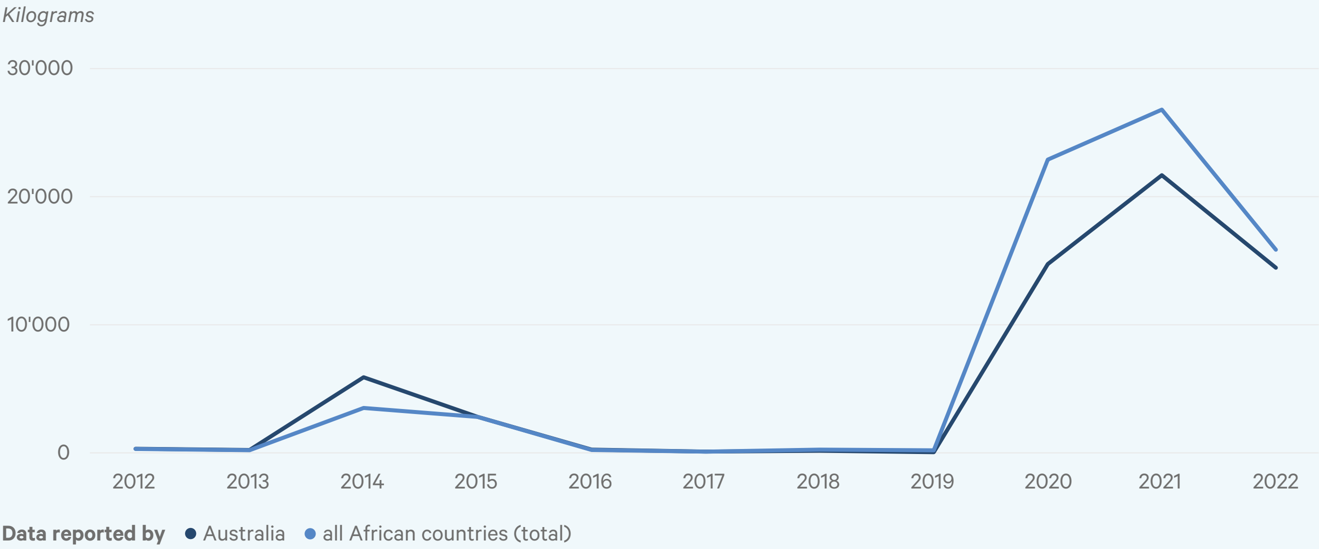
Gold exports from African countries to Australia between 2020 and 2022 were higher than the mirror data (see Figure 58). The differences are particularly marked in 2020 and 2021. In these years, Egyptian authorities reported quantities of gold for export to Australia (3.9 tonnes in 2020 and 2.4 tonnes in 2021) that were not reported by their Australian counterparts for import into Australia. SWISSAID assumes that this is a simple error on the part of Egyptian Customs but cannot rule out the possibility that this gold was imported into Australia without being declared.

Gold exports to Australia reported by the authorities of Côte d'Ivoire, Mali and Senegal for the years 2020–2022 and by the authorities of Ghana for the years 2021–2022 are all higher than the mirror data. The fact that these discrepancies concern several countries and several years suggests that they are the result of errors made when declaring gold to Australian customs. When contacted on this subject, The Perth Mint refinery indicated that the gold it imports is declared to customs by the transport companies with which it collaborates and not by itself. It added that in some markets, gold volumes are reported only by value and not by weight, and that part of the discrepancy could be due to volumes calculated based on average monthly values.[235]

In short, a summary analysis of the gold trade between Africa and Australia indicates that there are no grounds for suspecting illicit flows.

Gold casting at The Perth Mint refinery in Australia.

FIGURE 58 – Imports of gold from Africa into Australia versus mirror data



Sources: Australia: UN Comtrade HS 7108. Countries of origin: statistics of the African states, see appendix 5.

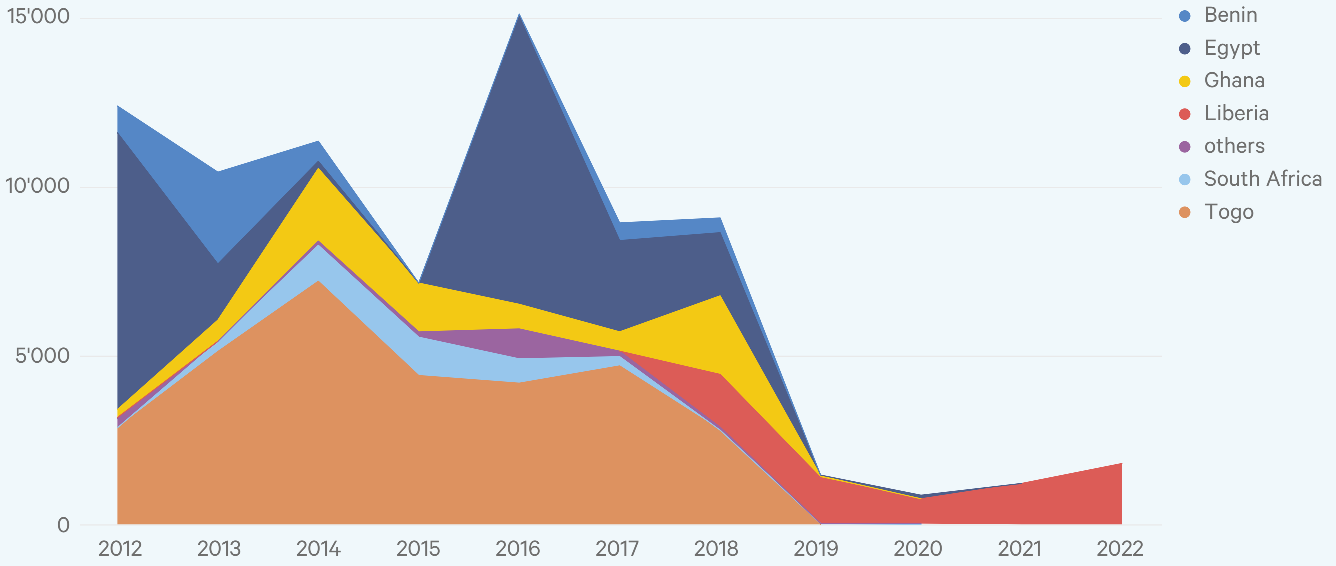
Lebanon

Imports of gold from Africa into Lebanon fluctuated widely between 2012 and 2022 (see Figure 60). They peaked at 20 tonnes of gold in 2016 and have remained at a relatively low level since 2019. The main countries of origin over this period are Togo, Egypt, Ghana, Benin and Liberia. In 2022, imports of African gold into Lebanon consisted almost exclusively of Liberian gold. These aspects are largely reflected in the gold exports to Lebanon reported by the African states (see Figure 59).

Some of the African gold imported into Lebanon has not been declared in the country where it was mined. This applies in particular to gold imported from Togo and Benin. Most of the African gold imported into Lebanon between 2012 and 2022 came from ASM.

FIGURE 59 – Exports of gold from all African countries to Lebanon

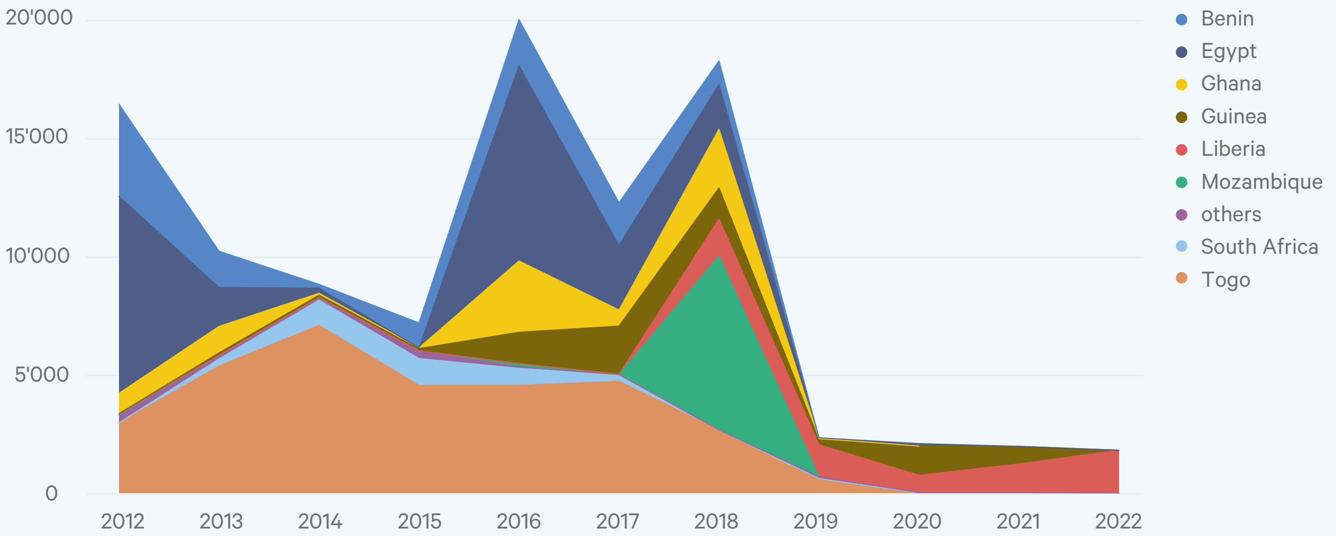
Kilograms



Sources: statistics of the African states, see appendix 5.

FIGURE 60 – Imports of gold from all African countries into Lebanon

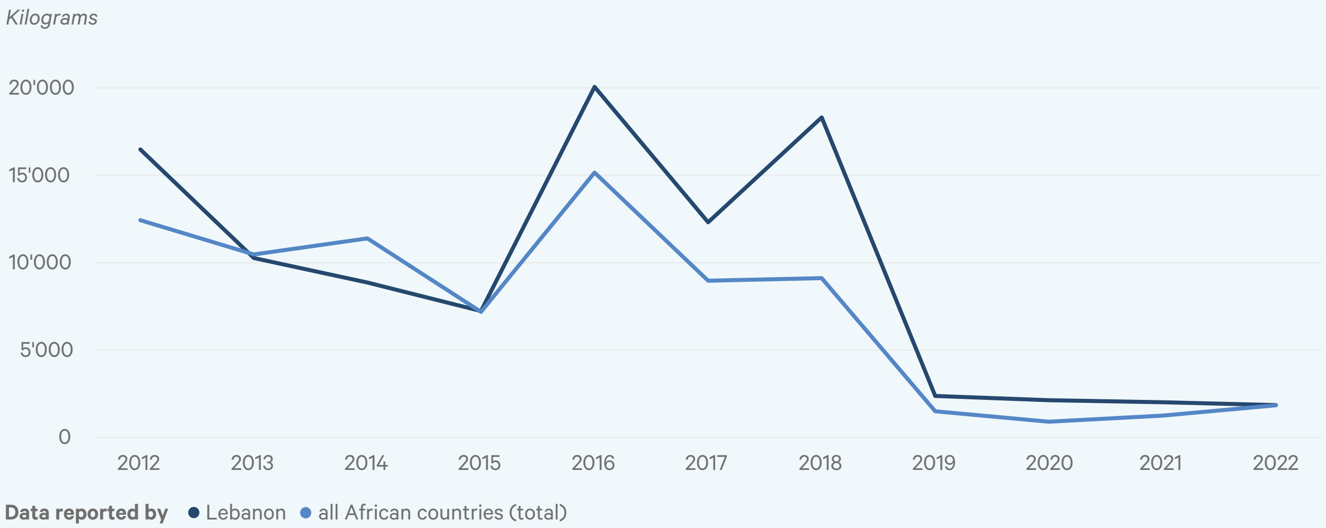
Kilograms



Sources: UN Comtrade HS 7108, data reported by Lebanon.

There are several sizeable gaps between data on exports of gold from Africa to Lebanon and the mirror data (see Figure 61). The gap regarding 2016 comes primarily from gold trade between Ghana and Lebanon, the one regarding 2017 from trade with Guinea and the one in 2018 from trade with Mozambique. In 2018 the Lebanese authorities suddenly reported gold imports from Mozambique of 7.3 tonnes, although imports from this country have not exceeded 150 kg in other years. SWISSAID did not attempt to explain this very surprising figure of 7.3 tonnes.

FIGURE 61 – Import of gold from Africa into Lebanon versus mirror data



Sources: Lebanon: UN Comtrade HS 7108. Countries of origin: statistics of the African states, see appendix 5.

China

China appears to be one of the main importers of African gold. For example, UN Comtrade data indicates that the country accounted for around 10% of the world's imports of African gold in 2022. However, this data is misleading. As explained above (see p. 32), African gold imports into China consist almost exclusively of gold declared as originating from South Africa but shipped from other countries. In other words, Chinese market players appear to source gold directly from Africa only in rare cases.

Many Chinese operators are involved in gold extraction in Africa, particularly in ASM and semi-mechanised gold mines. They are active in Ghana,[236] Nigeria,[237] au Mali,[238] RDC,[239] and CAR.[240] In some countries, research has shown that gold mined by Chinese nationals has been produced illegally and smuggled out of the country, in particular to China.[241] As these gold flows are not reported at any stage of the supply chain, SWISSAID is not in a position to assess the extent of this phenomenon.

"UN Comtrade data indicates that China accounted for around 10% of the world's imports of African gold in 2022. However, this data is misleading."

4.5 DESTINATION OF GOLD EXPORTS BY TYPE OF GOLD

The vast majority of gold exported from African countries is either raw mined gold (also known as "doré") or refined gold containing mainly freshly mined gold. However, several African countries, in particular Egypt and South Africa and, to a lesser extent, Morocco and Tunisia, have a market for reprocessed ("recycled") gold.[242] For example, Metal Focus estimates the quantity of "recycling" gold in Egypt at 42 tonnes in 2022.[243]

Monetary gold is rarely stored in African countries. According to a representative of an LBMA refinery, the monetary gold reserves of African commercial banks and central banks are generally located in Europe.[244] Algeria, South Africa and Libya have the largest monetary gold reserves on the continent.[245]

It is impossible to know precisely the countries of destination according to the type of gold exported, i.e. what quantities of ASM gold, industrial gold, reprocessed gold and monetary gold from the African continent have been exported to which country. African exporting countries do not generally publish the countries of destination by type of gold exported, and African gold importing countries do not publish the countries of origin by type of gold (Switzerland distinguishes between certain types of gold, but not between ASM gold and industrial gold[246]). However, by combining and comparing a wide range of statistics and information, it is possible to estimate these gold flows.

"In 2022, between 80 and 85% of African ASM gold was exported to the UAE, either directly or via African transit countries."

ASM Gold

According to SWISSAID calculations, between 433 and 596 tonnes of ASM gold were mined in Africa in 2022. Between 80 and 85% of this gold was exported to the UAE, either directly or via African transit countries (see p. 38). Between 8% and 13% was exported to India, mainly from Guinea, Ghana and Tanzania. The remainder was exported to Turkey, Hong Kong, certain European countries and Russia (in particular ASM gold from Sudan and CAR). These estimates relate only to the first transactions, as the ASM gold exported to the UAE, for example, was re-exported to India, Switzerland, Turkey and Hong Kong.

Despite the LBMA's growing commitment to encouraging its member refineries to source directly from artisanal gold miners,[247] the quantities of African ASM gold imported directly by these refineries have been very low in recent years: 2.6 tonnes in 2018, 2.6 tonnes in 2019, 1.7 tonnes in 2020 and 0.001 tonnes in 2021.[248] The refineries involved include Argor-Heraus (gold from the Central Bank of Ethiopia[249]) and Rand Refinery (gold from Fidelity Gold Refinery in Zimbabwe[250]). Recently, Istanbul Gold Refinery also processed artisanal gold from Madagascar[251] and MKS PAMP ASM gold from Ghana.[252] However, the quantities of African ASM gold processed by LBMA refineries could actually be much higher. In fact, there is a major risk that gold described as "recycled" processed by these refineries may in fact contain ASM gold freshly extracted from the mine. This risk is all the greater because intermediate refineries known for supplying African ASM gold, such as Affinor or Kaloti, have exported some of their gold to LBMA refineries or to companies affiliated to these refineries.[253]

Industrial gold

African industrial gold is mainly refined in South Africa, Switzerland and, to a lesser extent, India.[254] LBMA refineries reported processing 459 tonnes of fine gold from African industrial mines in 2018,[255] 465 tonnes in 2019, 465 tonnes in 2020[256] and 456 tonnes in 2021[257]. LBMA refineries therefore processed 88.3% of the total industrial fine gold mined in Africa in 2021, i.e. 516 tonnes. During these years, LBMA refineries in the "Europe & Africa" category (which refers almost exclusively to Rand Refinery) imported almost half of the African industrial gold processed by all LBMA refineries, i.e. between 208 and 230 tonnes of fine gold each year. The Swiss LBMA refineries processed between 148 and 177 tonnes of fine gold from these mines each year.

“Recycled” gold – monetary gold

According to Metal Focus estimates, 62.2 tonnes of “recycled” gold were placed on the market in Africa in 2022[258]. The quantities of gold jewellery produced on the African continent are also small. Again, according to Metal Focus, African countries produced 11.7 tonnes and consumed 48.1 tonnes of gold jewellery in 2022.[259]

The LBMA did not distinguish between reprocessed gold, recycled gold and monetary gold until at least 2021, which is the most recent year for which it has published data. Some of the reprocessed gold from African countries is exported to non-African countries, as confirmed by LBMA statistics. LBMA refineries reported processing 55 tonnes of “recycled” gold from African countries in 2018, 74 tonnes in 2019, 15 tonnes in 2020 and 15 tonnes in 2021.[260] This gold came mainly from South Africa and, to a lesser extent, Egypt. It is quite possible that some of the South African gold declared as “recycled” by certain LBMA refineries was in fact freshly mined gold (particularly in 2018 and 2019). The same applies to gold declared as “recycled” from Egypt, some of which may have come from Sudanese mines.[261] •

Wrapped gold bars produced by a Swiss refinery.

5

COMPARISON BETWEEN PRODUCTION AND TRADE

5.1 COMPARISON AT THE CONTINENTAL SCALE

This overview of the gold sector in Africa (Figure 62) brings together all the statistics collected by SWISSAID on gold production and exports from African countries and on the mirror data for these exports, i.e. gold imports from Africa into all non-African countries. Several observations can be made. Firstly, total gold production (declared and undeclared) in African countries, total gold exports from these countries and total African gold imports into non-African countries all increased between 2013 and 2022.

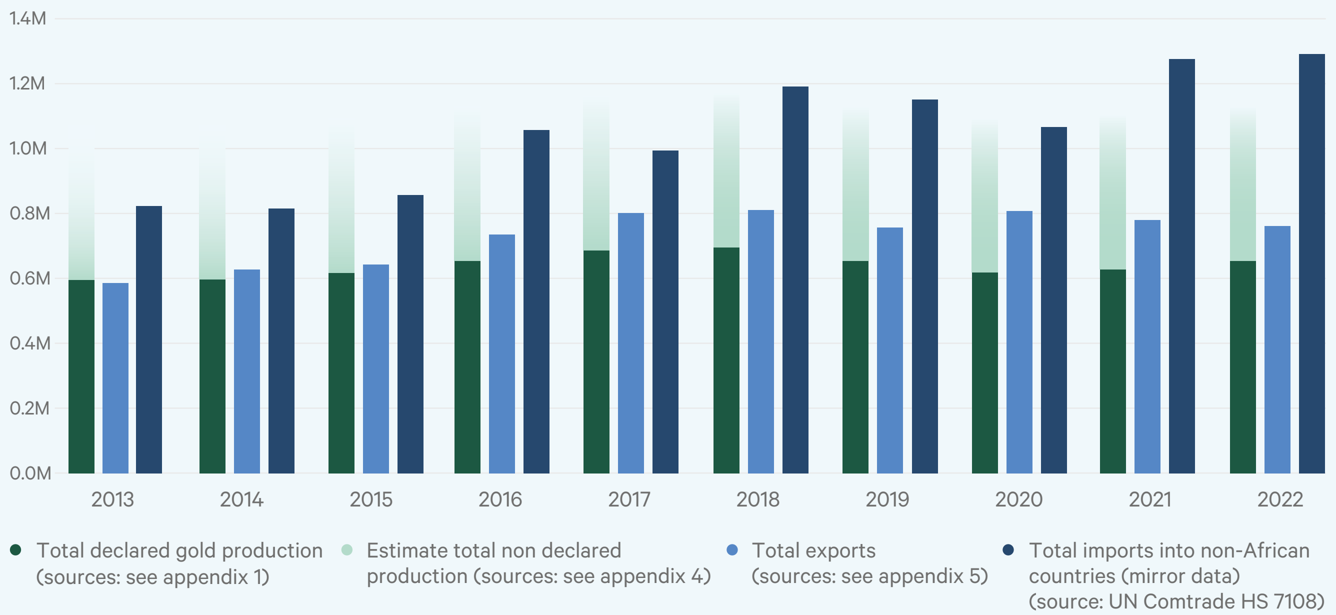
Secondly, the total quantities (declared and undeclared) of gold produced in Africa are less than or equal to the quantities of gold from Africa imported into non-African countries. In 2022, for example, gold production in African countries amounted to 991–1,144 tonnes, while imports of gold from Africa into non-African countries totalled 1,203 tonnes.[262] This indicates that virtually all the gold produced in Africa leaves the continent and is declared for import abroad.[263] More specifically, it suggests that **the vast majority of African gold not declared at the production stage or for export is declared for import in non-African countries**. In other words, gold from clandestine African circuits acquires a legal existence when it enters the international market (in particular via the UAE). It also suggests that invisible gold, i.e. gold whose production, export from an African country and import into a non-African country are not declared, represents only a tiny fraction of the total gold produced in Africa or exported from that continent.[264] Finally, a comparison of total gold production in Africa with gold imports from that continent into non-African countries shows that these imports consist mainly of mined gold.

Thirdly, the figures on gold production in Africa, in particular the estimates of undeclared ASM gold, seem relatively reliable, insofar as the corresponding quantities are found in the import statistics of non-African countries. A comparison of production and imports from non-African countries even suggests that **undeclared ASM gold production in Africa is at the top end of the range of estimates calculated by SWISSAID (474 tonnes), or even higher.**

Finally, a comparison of gold production in and exports from African countries reveals two main points. Firstly, total production of the yellow metal in Africa is higher than declared exports, which is due to the fact that **most African ASM gold is not declared for export**. On the other hand, declared exports are higher than declared production, which is explained by the role of several African countries as transit countries: **gold leaving a transit country is often declared for export in that country, but has not been declared at the production stage in the country where it was mined**. These observations are developed in the following paragraphs.

FIGURE 62 – Overview of the gold sector in Africa

Kilograms



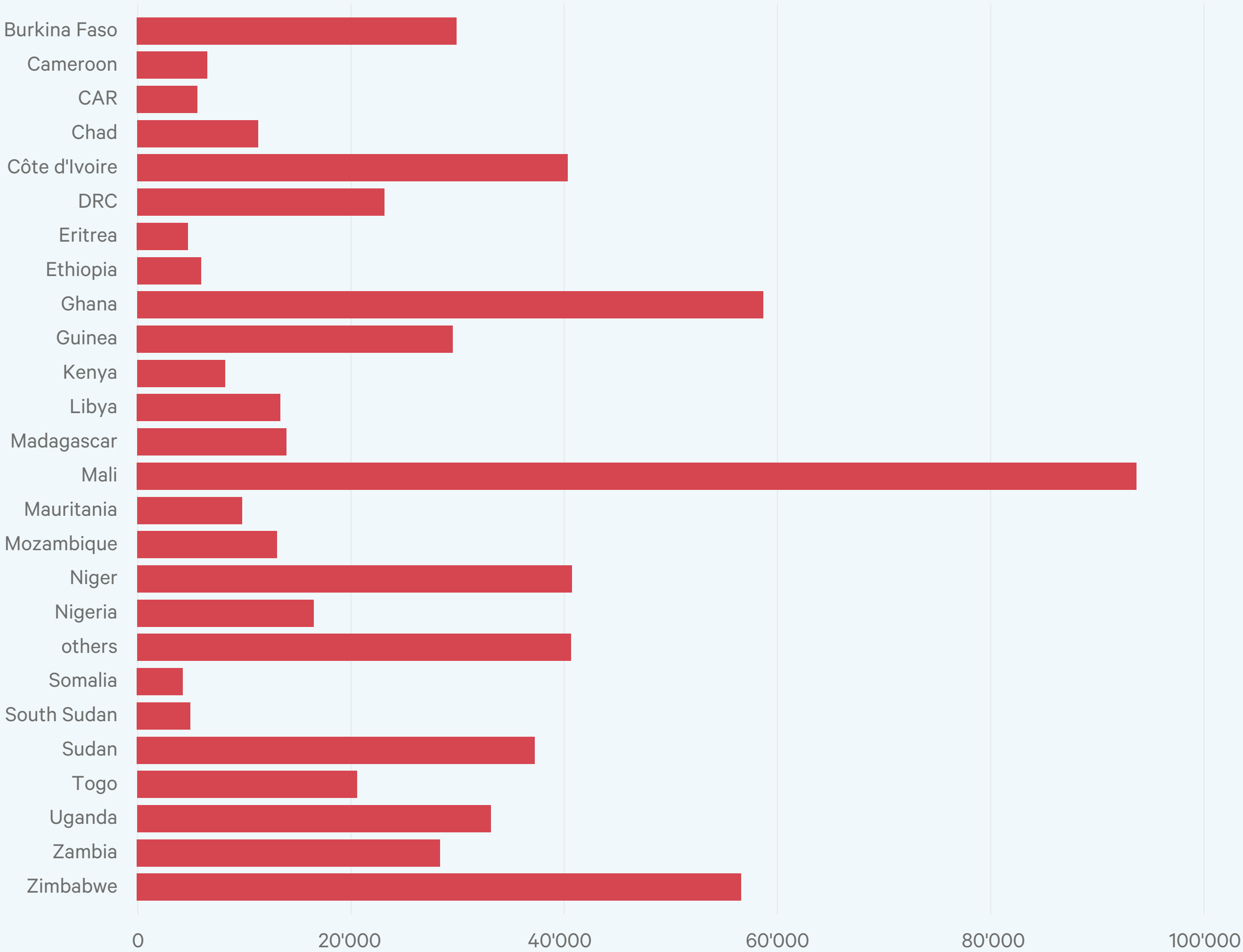
5.2 SMUGGLED EXPORTS

Most of ASM gold production in Africa is not declared for export. Quantifying this phenomenon accurately at the level of each individual country is a complicated exercise: much of the gold smuggled out does not appear in the import statistics of their partner countries, particularly when the gold is smuggled through neighbouring countries where it is not declared at import. However, a comparison between production (declared and undeclared), declared exports and imports into partner countries gives an idea of the scale of gold smuggling in African countries. Figure 63 shows that **more than 12 African countries are involved in smuggling more than 20 tonnes of gold a year.** The largest gold smuggling operations are in Mali, Ghana and Zimbabwe.

Gold smuggled out of African countries either goes to neighbouring or nearby countries, or to non-African countries. SWISSAID has classified the main African countries in either one of these categories according to their characteristics. It should be noted, however, that some belong to both categories at the same time.

FIGURE 63 – Exports of gold from African countries through smuggling in 2022 (according to SWISSAID's calculations)*

Kilograms



* This graph represents gold not declared for export, in the case of producing countries, and gold not declared for import (and declared or not declared for export), in the case of transit countries. The same gold may therefore appear in two columns at a time. In some cases, the data for 2022 was missing, so SWISSAID had to rely on slightly older data (see the appendices referenced below). South Africa has been omitted from this graph, because South African data is not representative.

Sources: Total production (declared and non-declared/estimated): see appendix 1 and appendix 4; Exports from country of origin: statistics of the African states, see appendix 5; Imports into the countries of destination: UN Comtrade HS 7108.

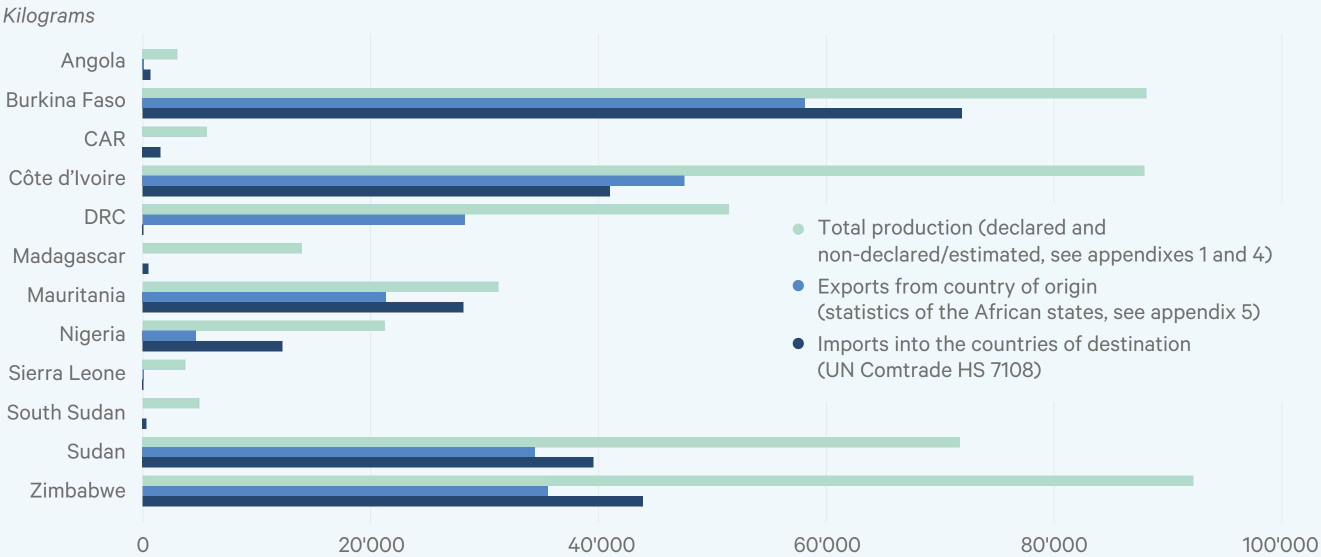
SMUGGLED EXPORTS TO NEIGHBOURING OR NEARBY COUNTRIES

As Figure 64 shows, some African countries have a total gold production higher than their exports and imports from their partner countries. This means that some of their gold is smuggled to one or more neighbouring or nearby countries (located in the same region) and is not declared as an import in that country or those countries.

In several cases, the destinations of smuggled ASM gold are known and established. For example, gold from Burkina Faso and Côte d'Ivoire is exported to Mali,[265] gold from Nigeria to Niger,[266] gold from South Sudan to Uganda[267] and gold from Zimbabwe to South Africa.[268] The example of Côte d'Ivoire (see Figure 65) shows that ASM gold from this country has been smuggled out of the country for many years.

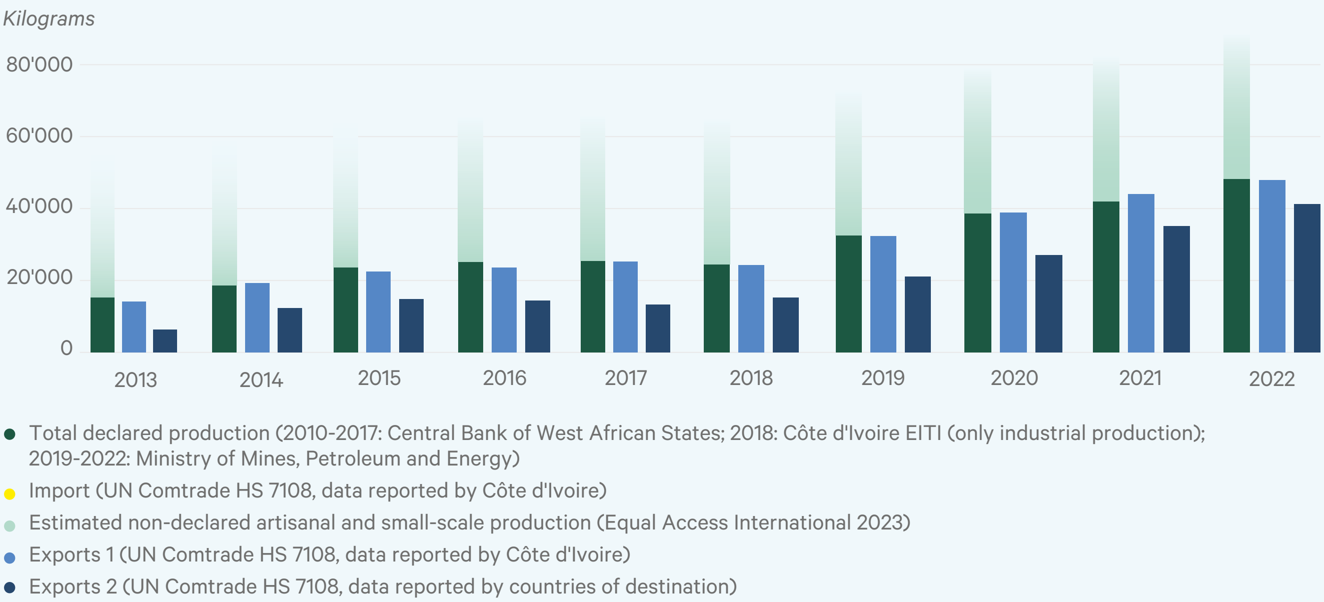
It should be noted, however, that the destinations of smuggled African ASM gold have changed in the past and are likely to do so again at any time, due to a multitude of factors.

FIGURE 64 – Examples of African countries from which gold was smuggled to a neighboring or near country in 2022*



*In a few cases, data for 2022 was missing, so SWISSAID had to rely on slightly older data (see appendixes referenced below).

FIGURE 65 – Overview of the gold sector in Côte d'Ivoire

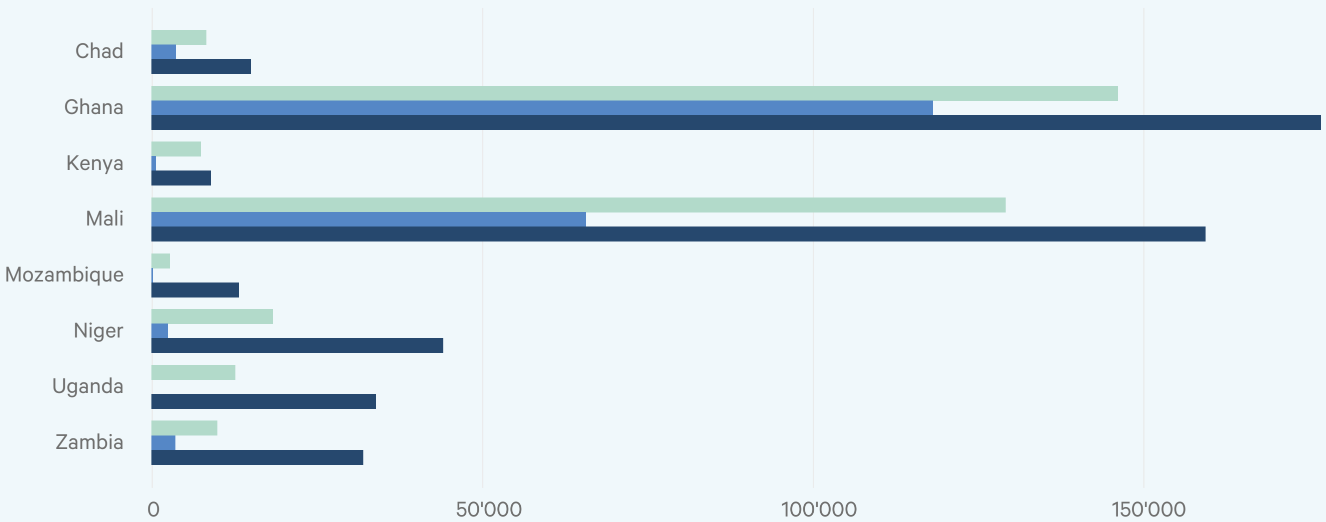


SMUGGLED EXPORTS TO NON-AFRICAN COUNTRIES

As Figure 66 shows, some African countries have a total gold production higher than their exports, but lower than or equal to their partner countries' imports. This means that some of their gold is smuggled out of Africa and declared on import in non-African countries. The UAE is the main destination for gold smuggled out of Africa.

FIGURE 66 – Examples of African countries from which gold was smuggled to a non-African country in 2022*

Kilograms



* In a few cases, data for 2022 was missing, so SWISSAID had to rely on slightly older data (see appendixes referenced below).

- Total production (declared and non-declared/estimated, see appendixes 1 and 4)
- Exports from country of origin (statistics of the African states, see appendix 5)
- Imports into the countries of destination (UN Comtrade HS 7108)

WAGNER'S INVOLVEMENT IN THE AFRICAN GOLD SECTOR

As journalistic investigations have revealed, for several years the Russian state has been involved via the Wagner mercenary group in the gold sectors of at least three African countries, namely CAR (links with Cameroon),[269] Sudan[270] and Mali.[271] There is little information on Wagner's activities in the African gold sector and virtually no precise data on the quantities of gold it controls. However, if the accounts gathered by journalists on the ground are to be believed, Wagner controls the production of several dozen tonnes a year. In Sudan alone, for example, CNN reports that "at least seven sources [...] accuse Russia of driving the lion's share of Sudan's gold smuggling operations." It seems that Wagner is managing to sell its gold on the international market, even though it is heavily involved in several armed conflicts in the region.[272]

A member of the Wagner paramilitary group wearing the group's crest

UNDER-DECLARATION OF THE EXPORT VALUE OF GOLD

Official statistics on gold exports from African countries can be misleading. The gold declared for export in these countries has not necessarily been exported in compliance with all legal standards, and exporters have not necessarily paid all the customs duties to which this gold is subject. For example, the discrepancies between gold exports from Benin and imports of gold declared as originating from Benin into partner countries differ greatly depending on whether we are looking at weights (see Figure 67) or values (see Figure 68). The annual values of gold declared for export from Benin are significantly lower than those which would normally correspond to the declared weights. This suggests that gold exports are significantly under-declared in Benin. When asked about this, Benin's General Directorate of Mines replied that it "cannot comment on figures obtained outside of the formal declarations received from operators.[273]

Togo has the same characteristics as Benin: a comparison of its gold exports with mirror data also reveals discrepancies in terms of value that are much greater than those in terms of weight. The available data indicates that the phenomenon of under-declaration of

FIGURE 67 – Exports of gold from Benin (weight)

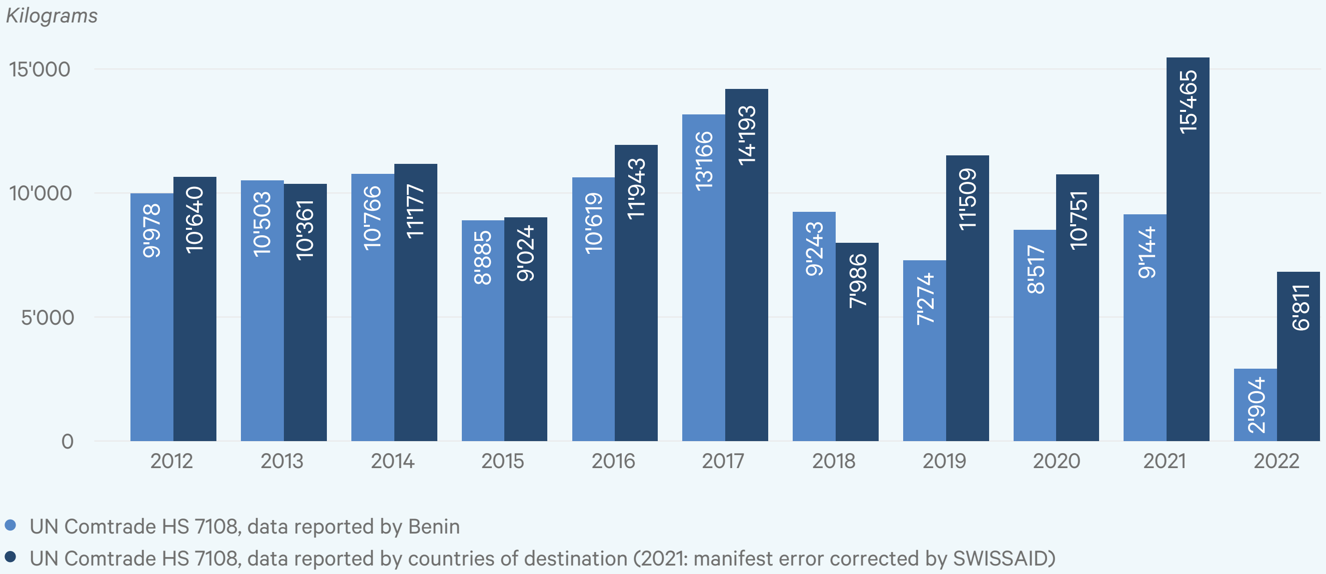
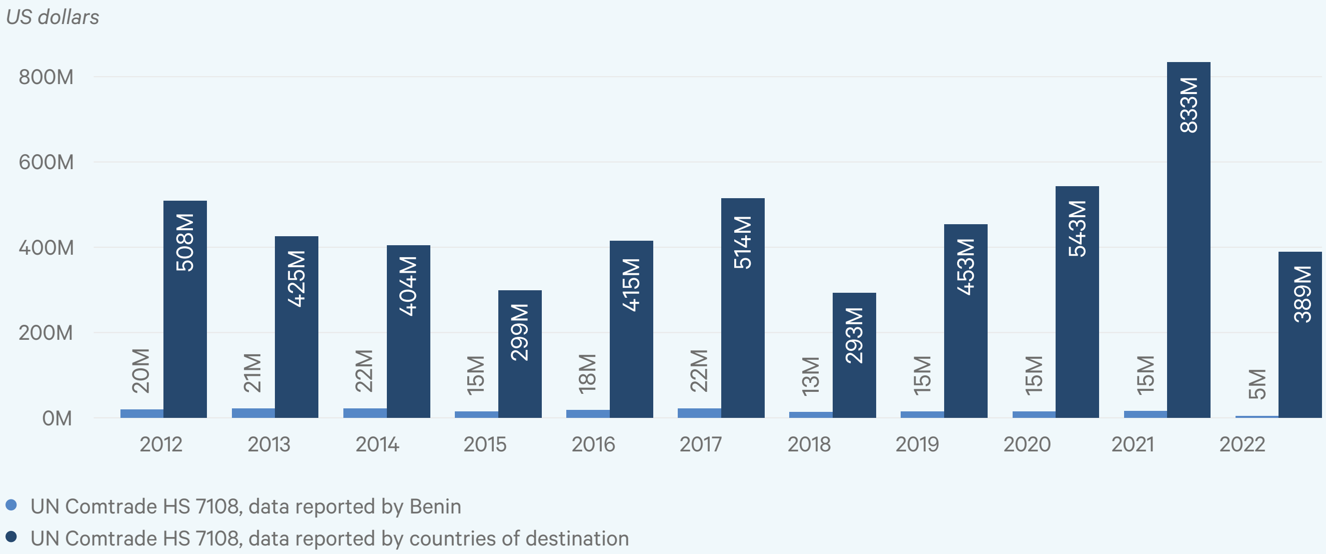


FIGURE 68 – Exports of gold from Benin (trade value)



gold exports from Togo has been going on for more than ten years. When asked about this, the Togolese General Directorate of Mines and Geology replied that "the discrepancies in values can be explained by the fact that the data declared by Togo are not the values of the gold shipped, but rather the customs taxes levied on gold exports. These taxes amount to FCFA 45,000/kg of gold exported."[274] This response is surprising given that the notion of commercial value is clearly defined in UN Comtrade.

Under-reporting may also be suspected in the case of the figures for gold exports from Niger to the UAE in 2020 and 2021 reported by the General Directorate of Customs of Niger to ITIE Niger, the Nigerien chapter of the EITI. Dividing the reported value of the gold by the reported weight gives gold prices of USD 29,541/kg in 2020[275] and USD 15,111/kg in 2021,[276] which are significantly lower than the price of the precious metal on the international market and even a "doré" from ASM.

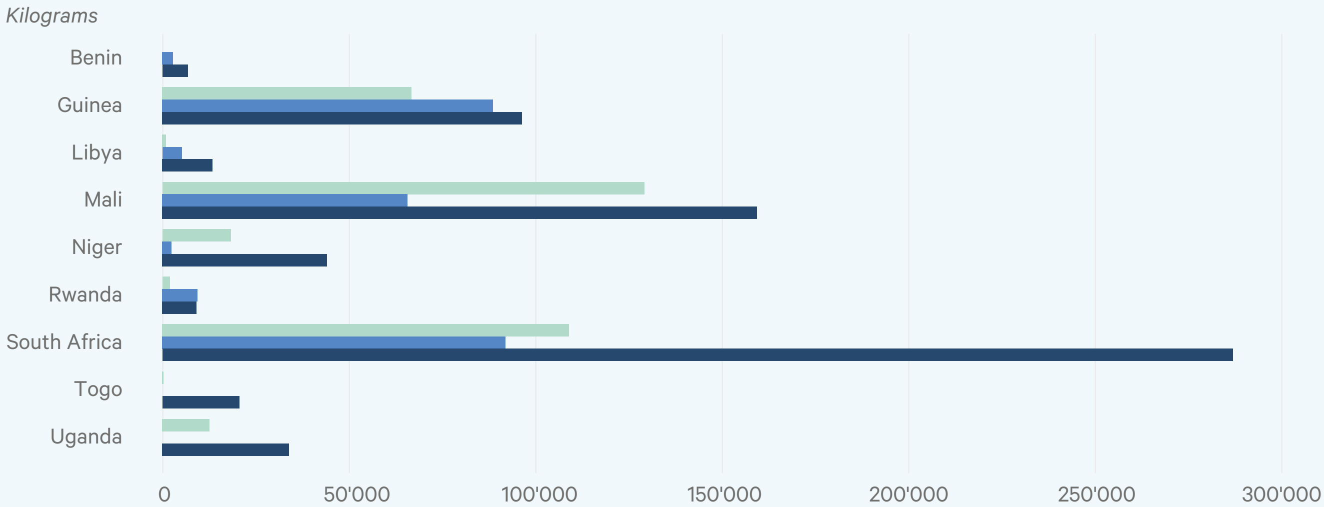
5.3 THE ROLE OF TRANSIT COUNTRIES IN AFRICA

As the overview of the African gold sector shows (Figure 62), African countries' reported gold exports are higher than their reported gold production. The gap between the two has gradually widened since 2016. Between 2017 and 2022, it was between 111 and 190 tonnes of gold per year. Although a small part of this gap can be explained by exports of gold not coming directly from the mine, most of it corresponds to mined gold that is not declared at the production stage, smuggled to a transit country then declared for export in that country.

As Figure 69 shows, in some cases the total quantity of gold produced in an African country is less than the total quantity of gold from that country imported into partner countries. This reflects the fact that gold from elsewhere (usually neighbouring countries) is imported into these African countries, most of the time through smuggling, then re-exported to non-African countries. In other words, some African countries act as transit countries for the gold trade. In some of these countries, such as South Africa, Uganda and Rwanda, local refineries (or local buying offices posing as refineries) play a central role in this type of trade.

The characteristics of African transit countries vary. Some have very high gold production, others very low. Some declare imports, others do not. Finally, some import gold that is declared for export in the country of origin, while others import gold that is not.

FIGURE 69 – Examples of African countries that served as transit countries in the gold trade in 2022*



* In a few cases, data for 2022 was missing, so SWISSAID had to rely on slightly older data (see appendixes referenced below).

- Total production (declared and non-declared/estimated, see appendixes 1 and 4)
- Exports from country of origin (statistics of the African states, see appendix 5)
- Imports into the countries of destination (UN Comtrade HS 7108)

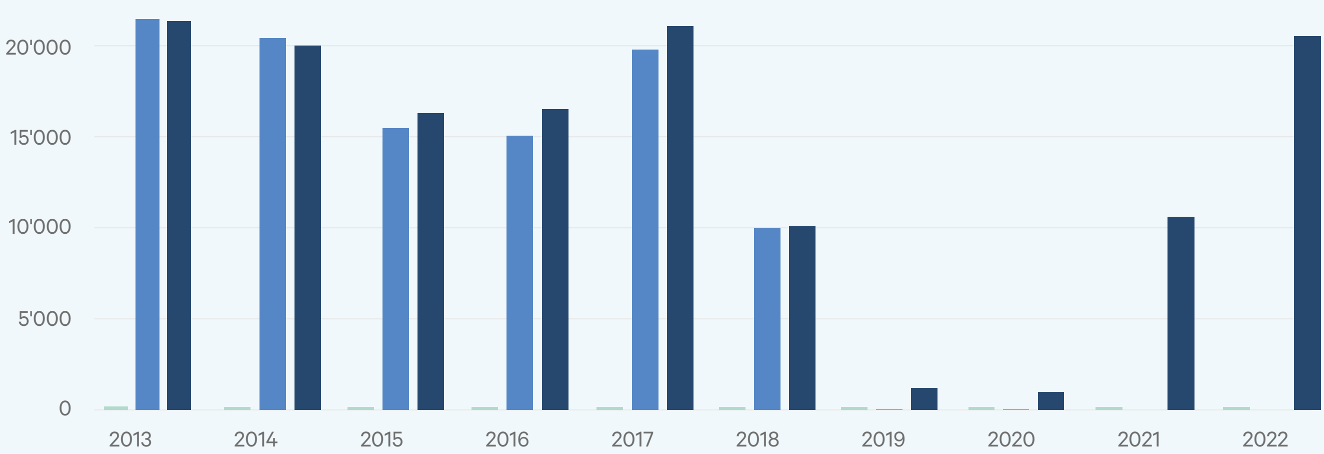
GOLD UNDECLARED ON IMPORT

Togo, Benin and Libya are examples of transit countries with extremely low gold production of their own.

As Figures 70 and 71 show, gold transiting through these countries was either not declared for import or only in very small quantities. For more than a decade, a dozen tonnes (in the case of Togo and Benin) or even several dozen tonnes (in the case of Libya) of gold on average transited through these countries each year without being declared on import. In the case of Benin and Togo, this is due to attractive taxation, inadequate controls and the presence of influential buying offices.

FIGURE 70 – Overview of the gold sector in Togo

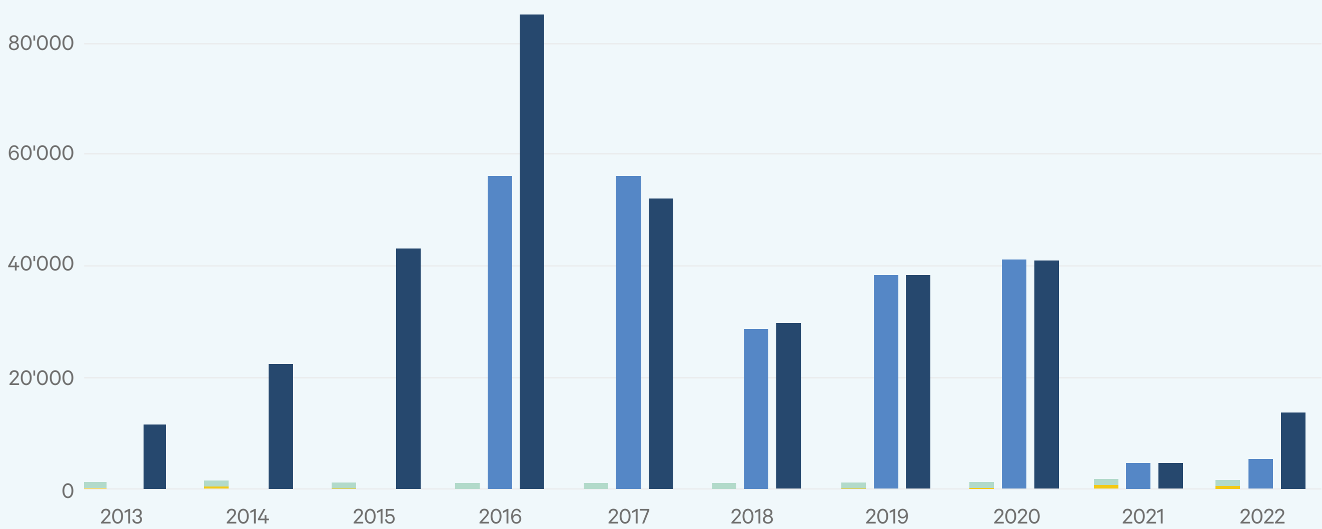
Kilograms



- Estimated non declared artisanal and small-scale production (Ministry of Environment and Forest Ressources 2022)
- Export 1 (UN Comtrade HS 7108, data reported by Togo)
- Export 2 (UN Comtrade HS 7108, data reported by countries of destination)

FIGURE 71 – Overview of the gold sector in Libya

Kilograms

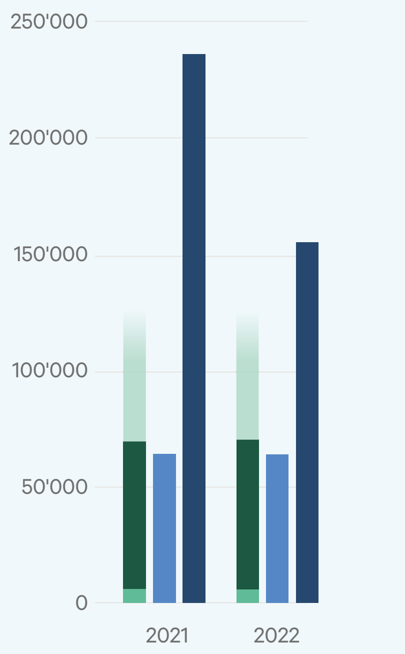


- Estimate of artisanal and small-scale production (anonymous expert)
- Import (UN Comtrade HS 7108, data reported by countries of origin, manifest error in data for 2014 corrected by SWISSAID)
- Export 1 (2013-2019: UN Comtrade HS 7108, data reported by Libya; 2020-2022: Central Bank of Libya)
- Export 2 (UN Comtrade HS 7108, data reported by countries of destination)

Mali, Guinea and Niger are transit countries whose own gold production is very high. Gold from neighbouring countries is smuggled in and then re-exported to non-African countries. The role of these countries in gold smuggling increased significantly between the late 2010s and the early 2020s. As Figures 72, 73 and 74 show, in some years the total quantities of gold produced in these countries are less than half the quantities of gold declared for import into non-African countries. Unlike smuggled gold transiting through Niger or Mali, gold transiting through Guinea is declared for export.

FIGURE 72 – Overview of the gold sector in Mali

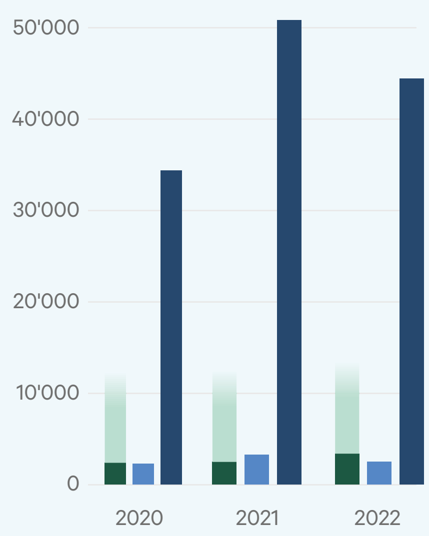
Kilograms



- Declared artisanal and small-scale gold production (estimates) (government data)
- Industrial production (government data)
- Estimated non-declared artisanal and small-scale gold production (OECD 2018 UN Group of Experts on Mali 2023)
- Export 1 (INSTAT)
- Export 2 (UN Comtrade HS 7108, data reported by countries of destination + INSTAT data on exports to South Africa)

FIGURE 73 – Overview of the gold sector in Niger

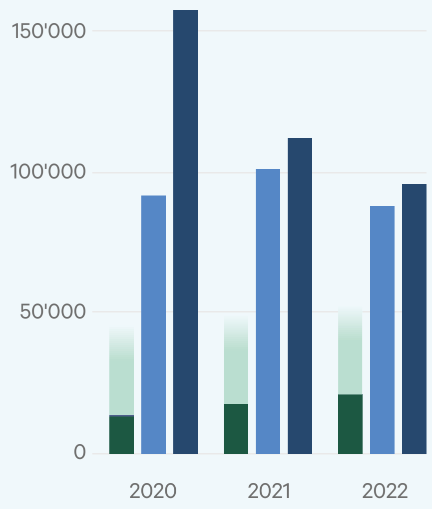
Kilograms



- Total declared production (Ministry of Mines)
- Estimated non-declared artisanal and smallscale (OECD 2018)
- Export 1 (2013-2014: EITI Niger, 2015-2022: UN Comtrade HS 7108, data reported byNiger)
- Export 2 (UN Comtrade HS 7108, data reported by countries of destination)

FIGURE 74 – Overview of the gold sector in Guinea

Kilograms



- Industrial production (Ministry of Mines and Geology)
- Estimated non-declared artisanal and smallscale production (Ministère de l'environnement, des eaux et des forêts & Centre africain de la santé environnementale 2021)
- Export 1 (Ministry of Mines and Geology)
- Export 2 (UN Comtrade HS 7108, data reported by countries of destination)

GOLD DECLARED ON IMPORT

Uganda is one of the transit countries where large quantities of gold are declared on import. As can be seen in Figure 75, these quantities more or less correspond to those declared for export (or re-export) in the same country.

Figure 76 shows that **the vast majority of gold imported into Uganda has not been declared for export in the countries of origin**. An analysis of these imports and of detailed Ugandan customs statistics for the years 2018 to 2021, which SWISSAID has managed to obtain, shows that the country of origin of gold imported into Uganda has often been incorrectly declared to Ugandan customs. In particular, the DRC hardly ever appears as a country of origin in these statistics (imports of just 0.7 tonnes in 2018), even though the existence and scale of gold flows from the DRC to Uganda have been amply documented, in particular by the UN Group of Experts on the DRC and various civil society organisations.[277] In addition, consignments of gold have been declared to Ugandan customs as coming from Tanzania by individuals with Congolese (DRC) nationality, which is a red flag. Similarly, consignments of gold have been declared as coming from South Africa or Tanzania by individuals owning companies operating in the DRC. Finally, several tonnes of gold a year have been declared for import into Uganda from countries with virtually no gold production, such as Gambia.[278] Once again, this is a red flag that there is reason to suspect the existence of illicit gold flows from other countries.

The Ugandan gold refinery African Gold Refinery (AGR) appears numerous times in official statistics on gold imports into Uganda. This refinery and its founder and former director, Alain Goetz, have been placed under sanctions by the American and European authorities because of their involvement in the illegal trade in gold from the DRC.[279] When contacted for the first time by SWISSAID, AGR responded by explaining how it exercised its due diligence.[280] When SWISSAID then asked specific questions, in particular about the real origin of the gold linked to certain transactions and certain dubious suppliers, the refinery refused to answer. SWISSAID therefore contacted Alain Goetz. He declined to answer any

FIGURE 75 – Overview of the gold sector in Uganda

Kilograms

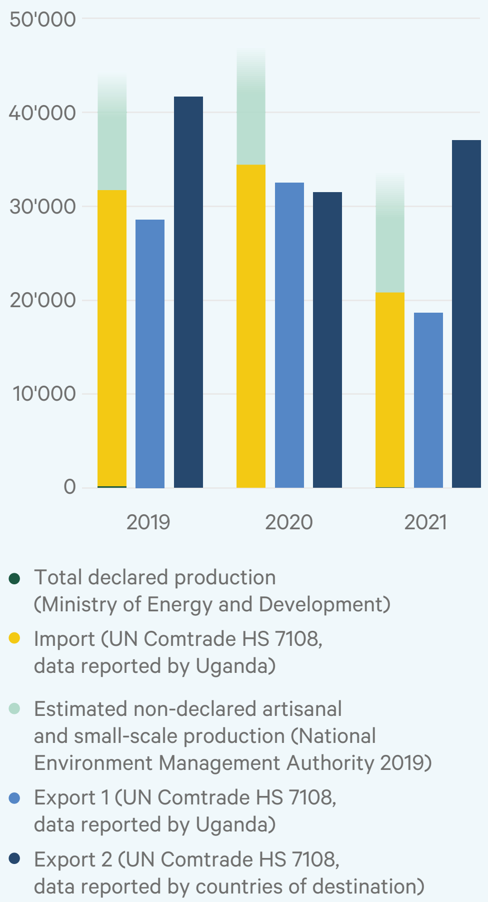
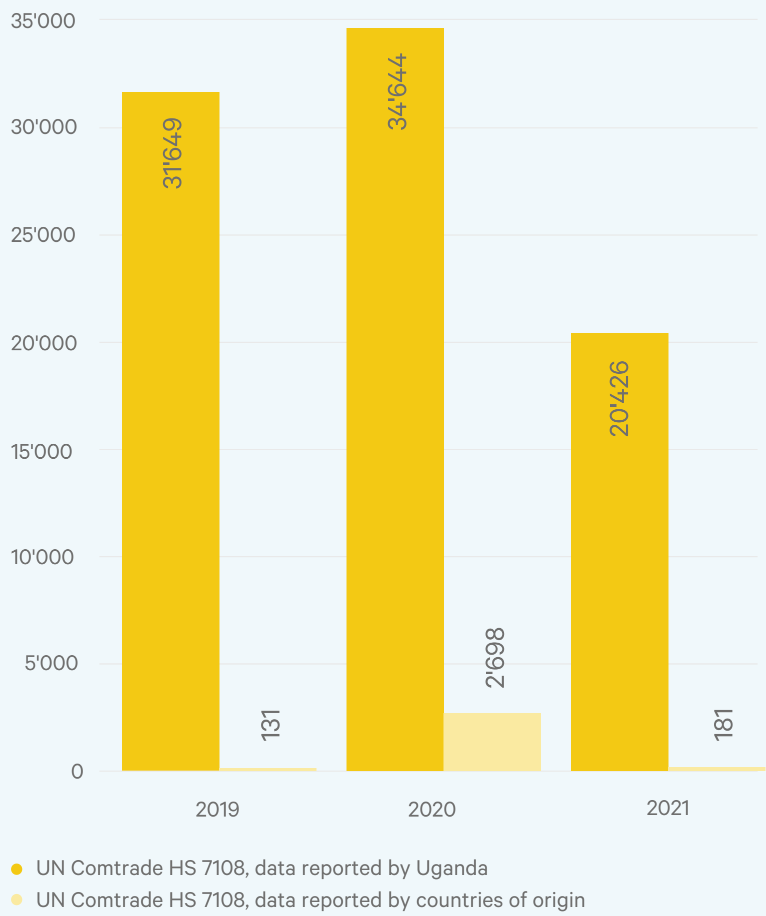


FIGURE 76 – Imports of gold into Uganda

Kilograms



A Zimbabwean customs control office.

questions, arguing that he had sold his shares in the company. However, he did say that he was "proud of AGR's impact on the precious metals industry in the Great Lakes region, especially on the level of transparency that AGR ushered in.[281]

Rwanda also appears to be a major transit country. Its gold sector has many similarities with that of Uganda: high quantities of gold are declared for import, but this is rarely reflected in the quantities of gold that are declared for export in the countries of origin. In particular, the DRC does not appear as a country of origin in official statistics on gold imports into Rwanda, even though it is common knowledge that gold from that country transits through Rwanda.[282]

South Africa is a special transit country. Some of the gold transiting through this country is declared for export in the countries of origin. However, it is impossible to know whether this gold has been declared in South Africa, as official statistics on gold imports into this country are incomplete (see p. 82). Another part of the gold transiting through South Africa, particularly that from Zimbabwe, is smuggled in.[283]

6 ANALYSIS OF DATA AVAILABILITY AND RELIABILITY

6.1 STATE DATA

The type and quantity of information published by state authorities on the gold sector in each African country varies greatly. As far as production statistics are concerned, some state authorities:

- do not publish any figures, e.g. the Rwandan and Eritrean authorities.
- only publish total (not disaggregated) figures, e.g. the Algerian authorities.[284]
- publish figures disaggregated by type of extraction (industrial, artisanal), e.g. the Burkinabe authorities.[285]
- have published a study of ASM total gold production, which contains an estimate of this production, e.g. the Senegalese[286] and Madagascan authorities.[287]

Similarly, when it comes to gold export statistics, some state authorities:

- do not publish any figures, e.g. the Eritrean authorities.
- publish incomplete figures, e.g. the South African authorities (see p. 83).
- only publish total figures (not disaggregated by type of extraction), the Burundian authorities.[288]
- publish figures disaggregated by type of extraction (industrial, artisanal), e.g. the Guinean authorities.[289]
- publish figures disaggregated by country of destination, e.g. the Sudanese authorities.[290]
- publish estimates of smuggled gold exports, e.g. the Burkinabe authorities.[291]

"Some of the data is erroneous or unrealistic, incomplete, imprecise, unreliable or inconsistent."

SWISSAID has asked the state authorities of African countries and those of countries where African gold is imported to provide it with statistics on their gold sector which are not in the public domain. Some have:

- refused to respond, e.g. the Ugandan, Algerian, Libyan and Chinese authorities
- responded, but refused to provide the data requested, e.g. the Ethiopian[292] and Rwandan[293] authorities.
- acknowledged that they did not have any figures for gold production from ASM, e.g. the Guinean,[294] Senegalese[295] and South African[296] authorities, or that there was not even an estimate of this type of production, e.g. the Beninese[297] and Malawian[298] authorities.
- provided statistics on production or exports or answered specific questions about the gold sector in their country, e.g. the Nigerian,[299] Nigerien[300] and South Sudanese.[301]

When analysing the data available publicly or obtained from state authorities, the authors of the study discovered many problems. Some of the data is:

- erroneous or unrealistic
- incomplete. This is the case, for example, when certain years are missing, when weights have been indicated but not commercial values (or vice versa) or when part of the national territory has not been taken into account.
- imprecise, for example when groups of countries are designated as destination countries.
- unreliable. This is the case, for example, with estimates of ASM gold production that are based on questionable methods or with data on a country's gold exports that are an exact copy of the data on gold imports from that country published by the partner countries.[302]
- inconsistent (see p. 88).

THE OPACITY OF SOUTH AFRICAN GOLD TRADE STATISTICS

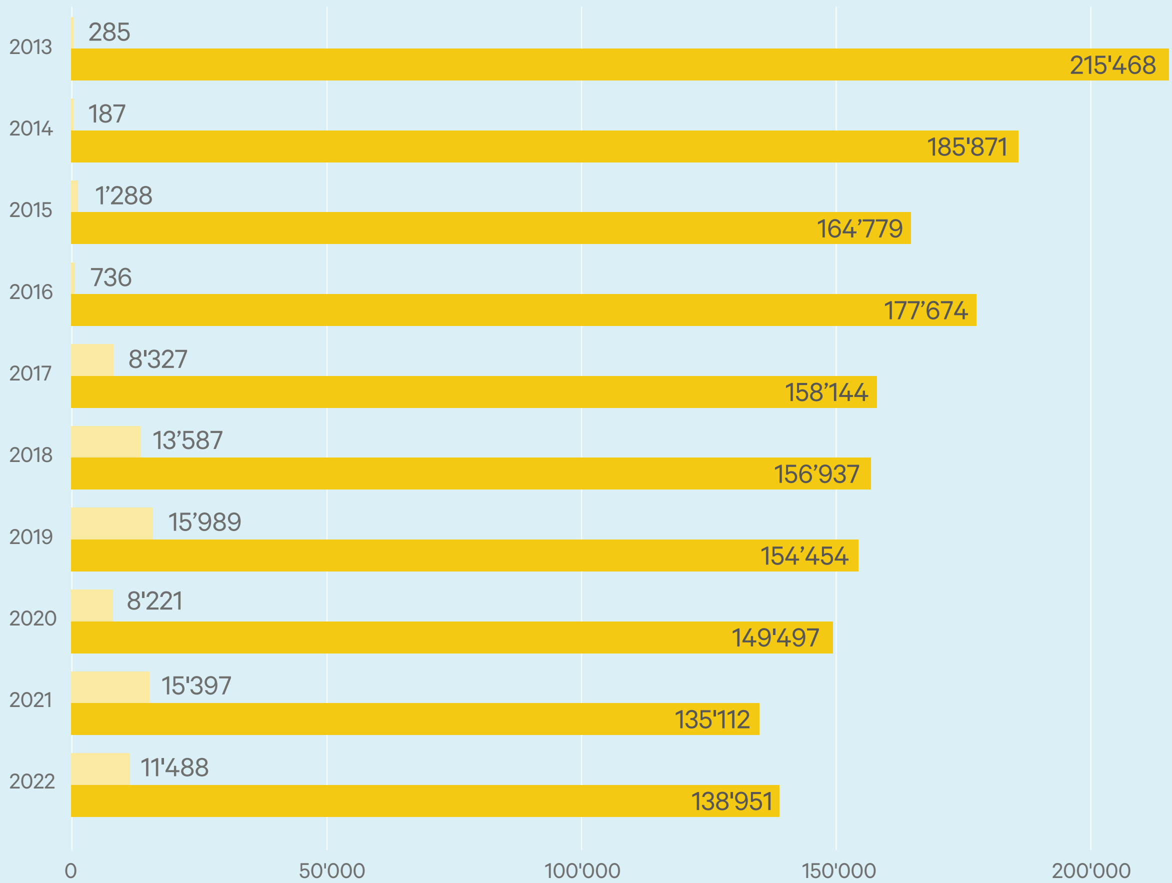
Statistics on gold imports into and exports from South Africa are opaque. This is due to the application of the strict special trade system and to "problems inherited from the past," according to the South African Revenue Service (SARS), the agency responsible for South African customs.[303] When asked about this by SWISSAID, experts from the United Nations Statistics Division (UNSD) said they were aware of the problem[304].

As far as imports are concerned, companies must declare their gold to South African Customs by choosing the Customs Procedure Code, e.g. "inward processing" (in this case refining) and "home use".[305] However, the statistics reported by SARS only cover gold imported for home use (for which the countries of origin are mentioned). The reason why the SARS does not publish statistics on gold imported for inward processing is that South Africa applies the strict special trade system.[306] A comparison of gold imports into South Africa from all over the world with gold exports from all countries to South Africa (see Figure 77) shows that gold imported for inward processing accounts for by far the largest proportion of gold imported into South Africa. The fact that the South African authorities do not report any figures on this type of import is therefore particularly problematic, as it is impossible to know precisely the total quantities of gold imported into South Africa and the countries of origin of this gold.

(Text box continued on next page.)

FIGURE 77 – Imports of gold into South Africa

Kilograms



UN Comtrade HS 7108, data reported by South Africa

Data reported by countries of origin (see appendix 6)

As far as exports are concerned, the statistics reported by SARS cover only gold mined in South Africa or from the South African market. The countries of destination of this gold are not disclosed, unless they are Botswana, Lesotho, Namibia or Eswatini. According to SARS, this is because these countries are members of the Southern African Customs Union (SACU),[307] just like South Africa. Gold that is imported, refined then exported is recorded at customs, but does not appear in export statistics.[308] This explains why there are huge discrepancies between the official figures for (a) the sum of gold imports and domestic gold production and (b) gold exports (see Figure 26), although most of the gold produced or imported in South Africa is exported. South African export statistics are therefore not representative of the quantities of gold that actually leave South Africa each year. Nor do they reveal whether ASM gold in the country (which is considered illegal) and gold smuggled in from neighbouring countries (mainly Zimbabwe) are declared for export.

SARS refused to provide SWISSAID with data on gold imports and exports disaggregated by country of origin and destination. It explained that "data is available but due to legacy issues data is not publicly accessible."[309] On its website, SARS states that "efforts are being made to move to a general system to enable easier comparison with other countries['] trade numbers."[310] SSWISSAID has asked SARS when this change will take place, but has not received a reply.

A South African customs vehicle.

6.2 UN COMTRADE DATA

UN Comtrade is one of the most frequently used sources for analysing international trade in goods. The United Nations Statistics Division (UNSD) manages this database. UNSD receives statistics on exports and imports of goods from the states of around 200 countries and makes them available online via a website.[311] It carries out only limited checks on these statistics,[312] and the quality and reliability of these statistics therefore depend largely on the measurement, collection and compilation methods used by the states.

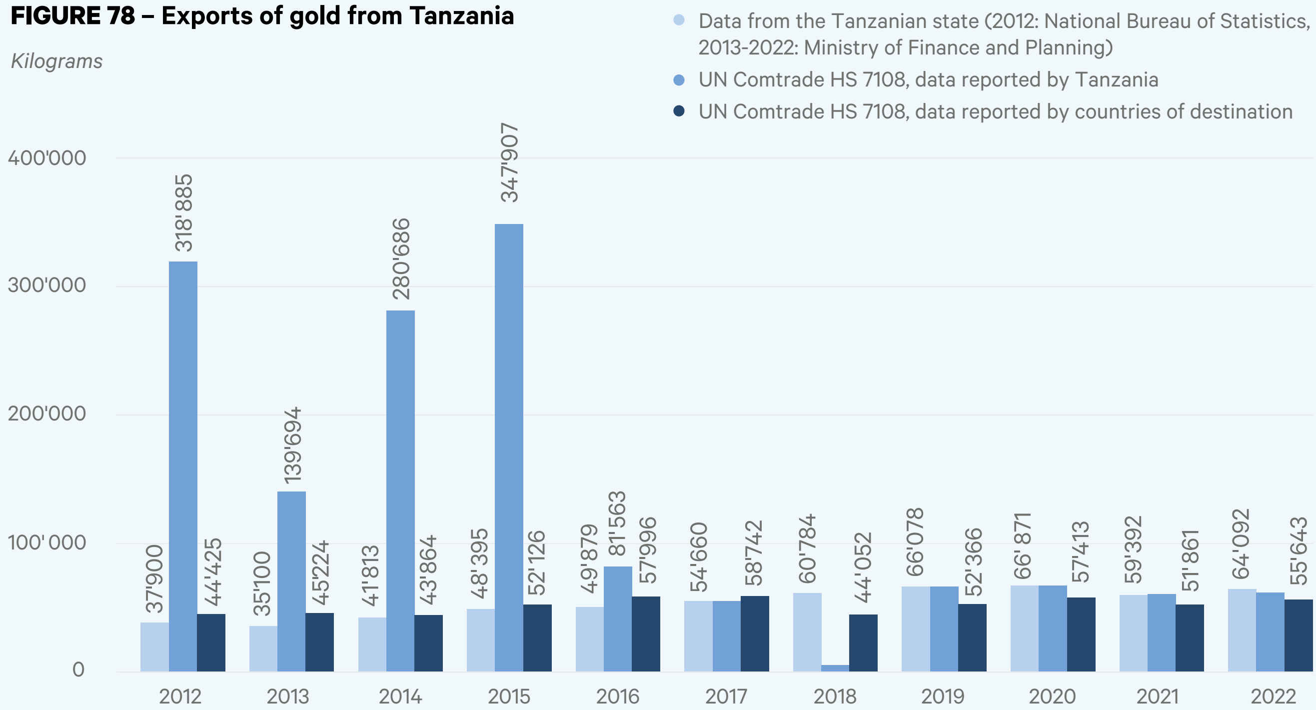
When using UN Comtrade data on the gold trade in its study, SWISSAID realised there were many problems.

Firstly, some states did not report **any gold trade data** to UN Comtrade during the reference period of the SWISSAID study (i.e. 2012–2022). This applies in particular to the Liberian, Sierra Leonean and Chadian states. In an exchange with SWISSAID, UNSD indicated that there is no obligation for states to report their foreign trade data. There is only a recommendation to this effect, formulated by UNSD based on a decision by the United Nations Economic and Social Council (ECOSOC). UNSD explained that some countries do not declare certain flows because of a lack of resources. However, the UN agency stressed that each country has its own customs system, so in theory it should have data from all countries.[313]

Secondly, some states reported **incomplete data** to UN Comtrade. Some have not reported any data for certain years, for example the Malian state for 2013–2015 and the Mauritanian state for 2019. Others have not reported data since several years, for example the Guinean state since 2017 and the Malian state since 2020. Some states have reported data that does not include weights, but only commercial values, for example the Kenyan state.[314] Other states reported data without specifying the country of destination of the gold, for example the Nigerien state in respect of 2015. Finally, the South African state is a special case (see p. 82). The UNSD experts responsible for UN Comtrade told SWISSAID that if there is a gap, they contact the country concerned and try to obtain the missing data. According to them, “most often, it’s not that countries refuse to report their data correctly, but they may lack the knowledge to combine it.”[315]

Thirdly, some states reported incorrect data to UN Comtrade. Some reported unrealistic weights, for example the Ghanaian state in respect of 2012, 2014 and 2018, the Tanzanian state in respect of 2012–2015 and 2018,[316] (see Figure 78), the Kenyan state in respect of 2017 and the Indian state in respect of gold imports from Ghana and Tanzania in 2014. When asked about this, UNSD explained that a new, more efficient data management system was adopted in 2018 and that, as a result, such errors should no longer occur.[317]

FIGURE 78 – Exports of gold from Tanzania



Some states reported countries of destination that were most likely incorrect, for example the Nigerien state in regard of gold exports to Switzerland, the Egyptian state in regard of (part of) gold exports to the UAE and the Beninese state in regard of gold exports to Ukraine. In the case of Benin, the Beninese authorities reported gold exports to Ukraine, while (a) the Ukrainian authorities reported no gold imports from Benin and (b) the Emirati authorities reported such imports. It is possible that the error is due to the fact that Ukraine and the UAE have names that begin with the same letter in English. Similar errors are likely to have been made in cases where Eswatini (formerly Swaziland) was given as the country of destination for gold exports actually destined for Switzerland.
Some states reported countries of origin that were probably incorrect. For example, some probably confused Eswatini (Swaziland) with Switzerland, while others probably confused Guinea with Guinea-Bissau. In other cases, false declarations were probably made to conceal the true origin of the imported gold (see p. 78).

Fourthly, some states have **copied data**. They have taken data on imports of gold reported as originating from their country that UN Comtrade had published and reported them in turn to the UN agency as gold exports from their country. For example, the official Libyan data on gold exports to the UAE (2018–2019) and to Turkey (2017–2019) are exactly the same in weight and value as the official Turkish and Emirati data on gold imports from Libya.[318] It is theoretically impossible for imports to have the same declared commercial value as the corresponding exports, as the former are declared on a “cost, insurance, and freight” (CIF) basis and the latter on a “free on board” (FOB) basis.

Fifthly, some states reported **data** to UN Comtrade **that did not correspond to their national statistics**. These include the Congolese (DRC) and Niger states (see Figures 79 and 80). When asked about this, UNSD explained that UN Comtrade is the official repository of national statistics, so its data should be as close as possible to national data.[319]

Sixthly, some states have **reported data to UN Comtrade and then asked for it to be amended**. For example, gold exports from Egypt to South Africa in 2016 were reduced from 17,099 kg to 4,010 kg between February 2022 and July 2023.

Furthermore, care must be taken when comparing UN Comtrade data. In particular, one must avoid basing an analysis solely on total gold exports or solely on bilateral gold exports, and rather take both into account. For example, the difference between Mali’s total gold exports reported by the Malian state to UN Comtrade and total gold imports from Mali reported by partner country states was 8 tonnes in 2018. However, the Malian state reported exports of 31 tonnes of gold to South Africa, which were not reported as imports by the South African state and reported gold exports to the UAE of only 1 tonne, while the Emirati state reported gold imports from Mali of 38 tonnes. The realistic difference would therefore be around 37 tonnes, not 8 tonnes. As another example, the Nigerien state reported gold exports of 6.17 tonnes of gold to Switzerland and 0 tonnes to the UAE in 2018, while the Swiss state reported gold imports from Niger of only 0.2 tonnes and the Emirati state reported imports from Niger of 8.63 tonnes. In other words, an analysis of bilateral flows reveals considerable discrepancies. A more global analysis shows that errors have probably been made in declaring the country of destination of gold exported from Niger and that, as a result, the real discrepancies are smaller.

“Care must be taken when comparing UN Comtrade data.”

6.3 EITI DATA

Launched in 2003, the Extractive Industries Transparency Initiative (EITI) is the global benchmark for transparency in the extractive industries. Fifty-six countries, including 26 in Africa, are members of the initiative and have committed to implementing its standard.[320] Major African gold-producing countries such as South Africa and Sudan have not joined. Each EITI Member State must establish a multi-stakeholder group, which could be called a national chapter, whose responsibilities include publishing an annual report on the extractive sector in the country in question. These reports contain key information and statistics on the extractive sector in the country, including production and trade in mineral resources during the reporting period.

The level of disaggregation of information on industrial gold exports published in EITI reports varies. Some reports (e.g. Niger EITI 2019[321] and 2020,[322] Côte d'Ivoire EITI 2019[323]) contain information on each transaction, with the name of the mine and the importing company. Others (e.g. Burkina Faso EITI 2012,[324] Mali EITI 2014,[325] 2015[326] and 2016,[327] Mauritania EITI 2013,[328] Guinea EITI 2018[329] and 2019/2020[330] and Tanzania EITI 2010/2011[331]) do not contain information on each transaction, but annual figures with the name of the mine and the importing company. Some reports (e.g. Burkina Faso EITI 2019[332]) only disclose the names of the countries of destination of the total gold exported (without mentioning the mines of origin), while others (e.g. Ghana EITI 2020[333]) do not disclose any information on the destination of the gold. SWISSAID has noted that some national chapters that have disclosed business relationships between industrial gold mines and refineries in the past (e.g. Burkina Faso EITI) have subsequently stopped doing so, which represents a step backwards in terms of transparency.

Generally speaking, reports published by the national chapters of the EITI contain little information on artisanal and small-scale gold mining. This is largely due to the highly informal nature of this sub-sector, which makes it difficult to obtain data on it.[334] However, some EITI reports do contain data on exports of ASM gold. For example, the Niger EITI 2020[335] and Madagascar EITI 2021[336] reports contain data on annual gold exports disaggregated by exporting company and country of destination, but with no mention of the importing company. The CAR EITI 2020 report contains data on exports by exporting company (and whether it is a mining company, smelter, buying office or cooperative) and by transaction, but does not mention the country of destination or the importing company.[337] As for the Ghana EITI 2020 report, it contains data on the quantities of gold purchased and the quantities of gold exported by approved gold exporting companies, but with no mention of the countries of destination.[338]

The EITI revised its standard in 2023 and strengthened the requirements for reporting on ASM.[339] We can therefore expect future EITI reports to contain more information on this type of extraction. In addition, the EITI Standard 2023 now requires implementing countries to disclose gold exports by exporting company and transaction and encourages them to disclose the destination and buyer as well.[340].

Some annual reports published by EITI national chapters contain errors. For example, the Mauritania EITI 2019 report states that the Tasiast mine exported 601 kg of gold to Swaziland.[341] When contacted, Kinross, the mining company operating the mine, indicated that this was an error.[342] Other annual reports contain differing figures on the quantities of gold exported without providing explanations for these inconsistencies (see p. 88).

A man descending into an artisanal gold mine in Tanzania

Gold bars in a Bank of England vault.

6.4 LBMA DATA

In its *Responsible Sourcing Reports* covering the years 2018–2021), the LBMA discloses the countries of origin and quantities of gold processed by refineries certified to its standard.[343] However, the London-based association publishes this data in aggregate form (by country, when four or more refineries are based in the same country, otherwise by region), to avoid disclosing information on each refinery. SWISSAID cross-checked these statistics with customs statistics and discovered numerous errors, either in the declarations made by the refineries to the LBMA or directly from the LBMA. The following is a list of errors which SWISSAID has identified and which the LBMA refineries concerned or the LBMA have acknowledged:[344]

- **Errors in the classification of countries and refineries.** For example, Egypt was classified in the "Middle East" category (and not in the "Africa" category) in the reports for 2018, 2020[345] and 2021. Similarly, the two Turkish LBMA refineries were classified in different categories in 2018 ("Europe & Africa") and in 2019–2021 ("Asia & Australia").

- **Errors in units of measurement.** In the 2018 report, imports by "Asia & Australia" refineries from African countries were given in tonnes in a table whose unit of measurement was kilograms. The table shows, for example, that these refineries imported 26 kg of gold from Ghana, although in reality it was 26,000 kg.

- **Errors in countries of origin.** For example, LBMA reports indicate supplies to LBMA refineries from Gabon in 2019 and the DRC in 2019 that never existed. Similarly, gold supplies from Mauritania (2021) and Egypt (2021) were attributed to refineries that never imported the gold. In addition, gold imported from Niger (2018) by an LBMA refinery does not appear in the statistics.

- **Errors in quantities.** This concerns, for example, gold supplies from Mauritania (2019), Egypt (2019), South Africa (2019) and Botswana (2019).

- **Errors in the type of gold.** For example, gold was declared as coming from industrial mines located in the UAE (2021) and artisanal mines located in Germany (2021), when there are no such mines in these countries.

SWISSAID has had several exchanges with the LBMA about these errors. The London-based association assured SWISSAID in 2022 that it would improve the quality of the data it releases, in particular thanks to the additional analysis of Metal Focus.[346] Despite this, the report it published in 2023 (on the 2021 reference year), still contained errors.

The fact that the LBMA does not sufficiently control the data it publishes is problematic. This can lead to erroneous conclusions when comparing LBMA data with data from other sources to detect possible illicit gold flows. It also poses the risk that fraudulent declarations, aimed for example at disguising the real origin of the gold, could go undetected. More generally, it raises the question of the quality and therefore the reliability of the LBMA's data.

6.5 INCONSISTENCIES BETWEEN OFFICIAL STATISTICS FROM DIFFERENT SOURCES FOR THE SAME COUNTRY

Official statistics on gold exports from African countries are available from a multitude of sources. SWISSAID has observed in many cases that sources relating to the same country contain very different figures. In the case of the DRC, for example, the data from UN Comtrade (which originally came from the Congolese state) is significantly lower than that from the Ministry of Mines (see Figure 79).

In the case of Niger, there are considerable discrepancies, particularly in 2020 and 2021, between the statistics of the Ministry of Mines, those of the Directorate General of Customs and those of UN Comtrade (see Figure 80).

FIGURE 79 – Exports of gold from the Democratic Republic of Congo

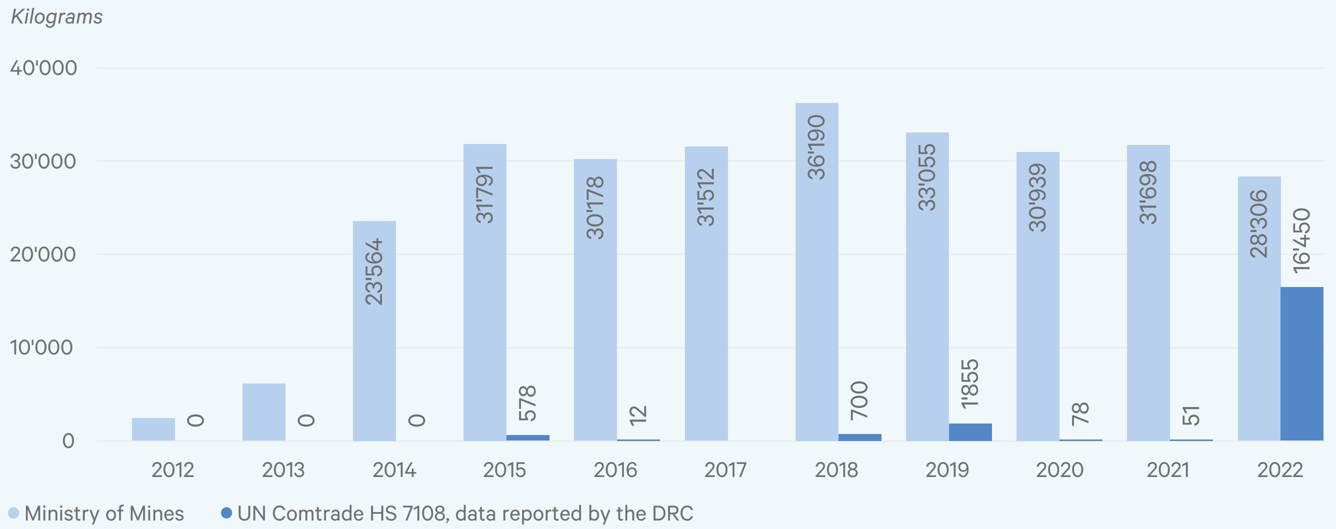
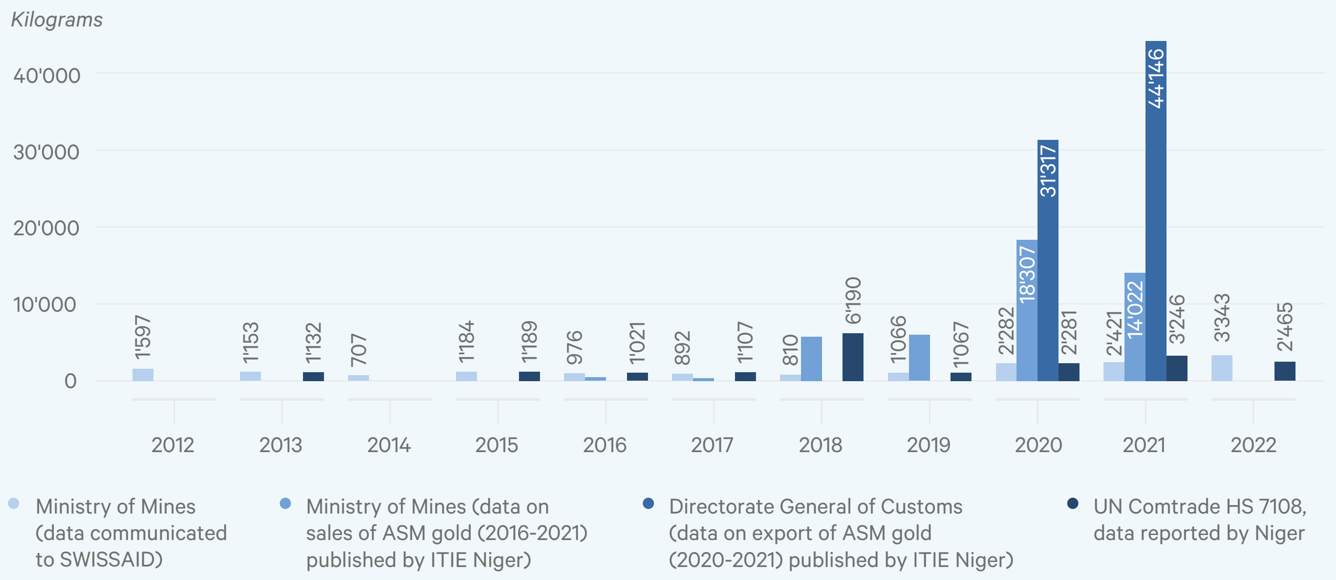


FIGURE 80 – Exports of gold from Niger



SWISSAID has found inconsistencies in official statistics on gold exports from many other African countries, including:

- **South Africa:** data from the Department of Mineral Resources and Energy do not match those of the Department of Trade, Industry, and Competition.
- **Zambia:** data from the Ministry of Finance and National Planning do not correspond to those of UN Comtrade.
- **Guinea:** in some years, data from the Central Bank of the Republic of Guinea, the Ministry of Mines and Geology and Guinea EITI differ by several tonnes.
- **Mauritania:** in some years, UN Comtrade data is lower than Mauritania EITI data
- **Nigeria:** the Nigeria EITI 2020 report notes discrepancies between data from the Nigerian Customs Service and the Mines Inspectorate Department.[347]
- **CAR:** the CAR EITI 2020 report notes discrepancies between data from the General Directorate of Customs and Indirect Taxation and the General Directorate of Mines and Geology.[348]
- **Ghana:** data from the Bank of Ghana, Ghana EITI and UN Comtrade differ by several tonnes[349].
- **Mali:** the data provided by the Directorate General of Customs does not correspond to that provided by the National Statistics Institute.
- **Sierra Leone:** the Sierra Leone EITI 2020–2021 report notes discrepancies between data from the National Minerals Agency and the Bank of Sierra Leone.[350]

These differences can be explained by a multitude of factors, including:

- the use of different data collection methods. This applies in particular to Ghana[351] and South Africa.[352]
- insufficient collaboration between state agencies in the reconciliation of data. This is particularly the case in Sierra Leone, as the country's authorities acknowledged in an exchange with SWISSAID,[353] and in the DRC. A representative of the DRC's National Statistics Institute (INS-RDC) told SWISSAID that a validation workshop should normally be held between state agencies before publishing statistics on gold exports.[354]
- gold has been declared to one government agency, but not to another. This is particularly the case in Niger, where statistical gaps suggest that a large proportion of the gold declared to customs has not been declared to the Ministry of Mines, which is the agency responsible for issuing export authorisations after payment of the marketing tax. Niger EITI recognises the problem and states in its 2020 report that "these significant discrepancies raise questions about the process for issuing certificates for export tax exemption, the taxation regime for ASM operators and coordination between the administrations involved in supervising and controlling ASM operations."[355] The Executive Secretary of the Niger EITI told SWISSAID in September 2023 that "the Prime Minister has referred the matter to the Court of Auditors to investigate the causes of these discrepancies."[356]

In the case of Guinea, the Central Bank of the Republic of Guinea told SWISSAID that there should be no discrepancy in the total quantities of gold exported and asked SWISSAID to contact the Directorate General of Customs, which did not provide an explanation.[357] And as far as CAR is concerned, the CAR EITI 2020 report states that the discrepancies raised were simply "not justified."[358]

"SWISSAID has found inconsistencies in official statistics on gold exports from many African countries."

6.6 INABILITY TO COMPARE DATA

In some cases, SWISSAID was unable to compare the available data. Comparison was impossible because the data concerned different types of gold or different reference periods.

A difference in the type of gold declared risks distorting the analysis if it is not identified as such. For example, in the case of Burkina Faso, SWISSAID discovered that the discrepancies between Burkina Faso's gold exports to Switzerland and the mirror data (imports of gold from Burkina Faso into Switzerland) were largely due to a difference in the types of gold taken into account on either side: while the Burkina Faso authorities report exports in fine gold, the Swiss authorities report imports in raw gold.[359] Similarly, it is impossible to make a direct comparison between customs statistics and LBMA statistics, as the former generally relate to raw gold and the latter to fine gold.

A difference in the reference period is also likely to distort the analysis if it is not recognised as such. Some state authorities report their gold production or export statistics by fiscal year rather than the calendar year. For example, Ethiopia EITI's reports cover the period from 8 July to 7 July of the following year.[360] Data from the Tanzanian Mining Commission[361] and the National Bank of Ethiopia[362] are based on a period from July to June. The same applies to Tanzania EITI's reports,[363] Uganda EITI's reports[364] and the majority of Liberia EITI's reports.[365] The latest Liberia EITI report even covers a period of 1.5 years (from July 2021 to December 2022.)[366] It is impossible to directly compare data reported by fiscal year with data reported by calendar year, as there is no common basis for comparison.

This problem of different reference periods also appears with LBMA data. For example, the South African refinery Rand Refinery and the Australian refinery The Perth Mint report their imports to the LBMA according to their own fiscal years (September to August for Rand Refinery and July to June for The Perth Mint). However, in its Responsible Sourcing Reports, the LBMA attributes these data to the following calendar year.[367] SWISSAID has drawn the attention of the London standard to the unwise nature of this practice, which distorts the data and makes comparisons impossible. It has asked the LBMA on several occasions whether it intends to adapt its reporting in this respect in the future. To date, the LBMA has not provided a satisfactory answer to this question. •

7

FACTORS EXPLAINING THE NON-DECLARATION OF ASM GOLD

Many factors can lead to ASM gold not being declared at the production stage or for export. The aim of this chapter is not to draw up an exhaustive list of these factors, some of which are specific to a national or even local context, but to mention the main ones, which can be found in a multitude of geographical contexts.

In Africa, as elsewhere in the world, the majority of artisanal gold miners operate without a licence, on unregistered sites where there is virtually no institutional oversight. This situation poses numerous social and environmental problems. As a result, there is often a desire, not only on the part of the state authorities but also on the part of other "stakeholders," to formalise the ASM subsector. The objectives pursued include: increasing income and improving working conditions for miners; reducing the risks of accidents, human rights violations and environmental degradation; increasing revenue for public authorities; and protecting artisanal miners from illegal actors and armed groups.

The clandestine nature of the production and marketing of a significant proportion of ASM gold is a complex problem, which can be approached in various ways. Some countries see artisanal and small-scale gold mining as an informal activity, a source of income and stability, while others see it as a criminal activity, a source of conflict and instability. As a result, official responses to the phenomenon vary: some states are committed to formalising and regulating artisanal and small-scale gold mining, while others have taken punitive measures against those involved in the sector. This second approach is often criticised as reinforcing the informality and illegality of the players targeted and increasing the vulnerability of artisanal miners to unscrupulous or even criminal players.[368]

7.1 FACTORS RELATING TO PRODUCTION

There are many barriers to formalising artisanal and small-scale gold mining and declaring the gold produced by this type of extraction.

Difficulty accessing bank loans and other forms of capital. Artisanal gold miners need money to obtain a permit and concession, and the equipment they need to operate.[369] The informal status of the majority of them prevents them from accessing the formal financial system and obtaining bank loans. As a result, they are forced to turn to parallel financing systems, exposing themselves to the risk of being involved in illicit financial flows.[370]

The complexity and cost of regulations.[371] Artisanal mining permit holders are subject to complex taxation, which may include fixed fees, taxes, royalties, and flat-rate taxes.[372] Taxes may be levied, for example, on the miner's card, the means of transporting the ore or the use of certain equipment.[373] In some cases, miners must also pay fees or "taxes" for mine security, whether provided by state armed forces, private companies or criminal organisations.[374] Corruption and a lack of transparency on the part of state institutions regarding the destination of funds collected through taxes and duties do little to encourage players in the sector to meet their tax obligations.

Lack of incentives. The process of formalisation and compliance with the legal framework often involve considerable costs for the players concerned. One might therefore imagine that the state would encourage them to formalise by giving them access to certain facilities or infrastructure (e.g. health centres, schools). However, this rarely, if ever, happens.

Shortcomings of the legal framework.[375] Some rules are inappropriate, some provisions are too vague and some texts are inconsistent.[376] In some legal frameworks, the definition of artisanal and small-scale gold mining is unclear.[377] In addition, some stakeholders affected by the gold ASM, in particular women and indigenous peoples, are not consulted in the development of public policies in this sector.[378] In the case of indigenous peoples, this can lead to gold mining being carried out on their land even though the legal framework does not provide for this possibility.[379]

Poor enforcement of regulations. This is due in particular to the fact that state agencies often lack the resources, especially financial resources, to ensure that regulations are implemented, in particular the control, monitoring and supervision of mining sites. It is also due to the lack of decentralisation and coordination problems between state agencies.[380]

The absence or passivity of state agencies. They rarely provide support to the sector's players, for example by making basic services available to them or offering them technical training.[381]

Uncertainty. Artisanal miners are frequently exposed to the risk of being evicted by holders of exploration or industrial mining permits, which incentivises them not to take steps to formalise their operations.[382]

The difficulty of obtaining an artisanal mining permit. Although cross-border mobility is very important in artisanal and small-scale gold mining, artisanal miners face numerous obstacles if they seek to obtain an operating licence in a country of which they are not nationals.[383]

Lack of geological information. This is a barrier to formalisation and leads to a lack of investment, low returns and increased environmental degradation.[384]

The lack of areas or corridors with high mining potential reserved for artisanal and small-scale gold mining. As a result, artisanal miners are often forced to work on land already covered by existing titles, in particular mining company concessions, or on so-called "customary" land.[385]

The lack of organisation among artisanal gold miners. Most are not part of any cooperative or private company, which prevents them from accessing certain benefits, such as funding, technical assistance, training or information on the legal framework.[386]

Corruption. Corruption can take many forms. For example, people pay village chiefs or community leaders to exploit gold illegally;[387] soldiers associate with artisanal miners who have no licence;[388] or security forces facilitate access to mining sites during the period when the sites are closed (rainy season) in exchange for money, or even exploit the sites themselves.[389] Corruption is common in the gold mining sector, but it should be pointed out that it is not unique to this sector; the major industrial mining groups are also affected by this phenomenon.[390]

The pursuit of illicit profits by state actors. For example, local administrations levy taxes without a legal basis or on sites for which there is no operating permit;[391] law enforcement officers take part in extortion on sites they are supposed to control;[392] members of the political elite profit from artisanal and small-scale gold mining and actively oppose formalisation efforts that run counter to their interests.[393]

7.2 FACTORS RELATING TO EXPORTS

There are many reasons why ASM gold leaves African countries without being declared for export

The purchase price of gold. In many countries, the purchase price of gold on the parallel market is higher than the price of the precious metal on the international market. As a result, gold circulates mainly through clandestine channels. In Mali, for example, many *comptoirs* (buying houses) are offering purchase prices that are around 200 FCFA per gram, or 1–2%[394] higher than the price of the yellow metal on the international market. According to Dario Littera, a refiner operating in the country, one of the reasons for this is that gold is used as a currency of exchange in the purchase of goods in Dubai, which are then imported and resold in Mali at a high profit margin.[395] This phenomenon has also been observed in Burkina Faso and Niger: a 2018 OECD report states that the high purchase price of gold in these countries is offset by "the import of products, especially electronics, purchased in Dubai and resold locally with margins of around 25–30%."[396]

The non-attractiveness and inefficiency of state purchasing programmes. This point is linked to the previous one. Many African states have developed an ASM gold purchasing programme and some have even granted themselves a monopoly in this area. In most cases, this programme is implemented by the central bank (e.g. Central Bank of Nigeria,[397] Bank of Ghana,[398] National Bank of Ethiopia,[399] Bank of the Republic of Burundi,[400] Reserve Bank of Malawi,[401] Central Bank of the Republic of Guinea,[402] Central Bank of Mauritania,[403] Central Bank of Madagascar,[404] Central Bank of Sudan,[405] Bank of South Sudan,[406] Bank of Tanzania[407] and Reserve Bank of Zimbabwe/ Fidelity Gold Refinery[408]). In several countries, the official purchasing programme has come up against major obstacles. For example, in South Sudan, the amounts allocated were insufficient to purchase a significant proportion of the gold produced.[409] In Ethiopia[410] and Malawi,[411] the official purchase price was much lower than the price of gold on the parallel market. In some countries, notably South Sudan, Mauritania and Sudan, the official buying programme was interrupted.

The cost and red tape involved in export procedures. Differences in the tax regimes of exporting countries encourage gold smuggling. A country with a more attractive tax regime than its neighbours necessarily attracts flows of gold from them. Countries such as Mali, Guinea, Togo and Uganda have become destinations for smuggled gold and export hubs, thanks in part to their attractive tax regimes. The charges levied on gold exports can vary considerably from one country to another within the same region.[412] For example, between ECOWAS countries, the difference can exceed USD 2,000 per kilogram of gold exported, according to a 2018 UNIDO study.[413] In Burkina Faso, according to one gold exporter, export fees are so high that it would be impossible to make a profit by exporting gold legally.[414] A change in a country's export tax can transform the route taken by smuggled gold and even reverse the direction of flows, as illustrated by the example of gold flows between Guinea and Mali.[415] In addition, export procedures are often administratively cumbersome. In the case of gold exports from the DRC, for example, the NGO IMPACT has identified 26 stages involving several government agencies.[416]

Difficulties in accessing the formal financial system. In many countries, lack of access to traditional financial institutions (e.g. banks, microcredit) encourages the marketing of gold through smuggling networks.[417] Artisanal miners are often dependent on informal and sometimes criminal financial players, to whom they are forced to sell their gold.[418]

Corruption and loopholes in the control of gold marketing channels. Collectors, *comptoirs* or buying offices and refineries are often not required to justify the origin of their gold or to account for their activities. Land borders are poorly controlled and there are shortcomings in airport controls and checks on customs declarations. For example, the practice of declaring only a small proportion of exported gold to customs and smuggling most of it out is widespread in several countries.[419] These shortcomings are primarily due to a lack of resources on the part of government officials, inadequate legislation and corruption. The involvement of customs officials or police officers in gold trafficking has been widely documented, notably in Mali,[420] Burkina Faso and Niger.[421] When bribes paid to government officials are lower than official taxes, traders automatically turn to illicit markets and smuggling.[422] In some countries, such as Ethiopia,[423] South Sudan,[424] Zimbabwe[425] and Madagascar,[426] government officials and politicians have been directly involved in the illegal gold trade. The difficulty of controlling illicit gold flows also stems from the fact that the majority of transactions are not carried out via the traditional banking system, but in the form of "trade-based money laundering" or via parallel money transfer systems, such as *hawala*.[427].

Geographical proximity and ethnic affinity. Geographical proximity between producing regions and export hubs can play a decisive role. This is the case, for example, in the Siguiri region of Guinea, which lies on the border with Mali and whose gold is partly smuggled out of the country via Bamako.[428] Ethnic affinities between gold producers and traders based on either side of a border can also explain the flow of gold across that border. For example, the Malinke of Senegal trade gold with the Bambara of Mali, who belong to the same ethnic group.[429]

Legislation on currency repatriation. A 2018 OECD report highlights the problem of slow and costly procedures for exchanging and repatriating currency.[430]

7.3 THE KEY ROLE OF BOTTLENECKS IN SUPPLY CHAINS

In Africa, gold is extracted and processed by millions of miners using artisanal methods. It is often smuggled out of the country, and border control is a major challenge. But this gold passes through bottlenecks, as most of it travels through the airports of producing countries or transit countries before reaching a limited number of destination countries, foremost among which is the UAE. In addition, in several countries, a small number of public institutions and companies control the marketing and export of much, if not most, of ASM gold. Besides the central banks mentioned above, these include or have included: Wafex and Soltrans in Togo; the Trading Track Company in Benin; Afrior and Comini in Niger; Somika and Sav'Or in Burkina Faso; a number of refineries in Uganda, including African Gold Refinery; the Gasabo Gold Refinery in Rwanda; companies owned by Mohamed Hemeti in Sudan; and certain *comptoirs d'achat* in Mali. As a result of these bottlenecks, it is relatively easy to control the marketing and export of African ASM gold, and African governments can be expected to do so. •

An artisanal gold mine with an industrial gold mine in the background, Geita region, Tanzania.

8 RECOMMENDATIONS

Most of the issues raised in this report have previously been highlighted in publications, most of which focus on a particular country or region[431]. SWISSAID has compiled a non-exhaustive list of recommendations from these publications and added its own.

TO AFRICAN STATES

GENERAL RECOMMENDATIONS	**Formalisation of artisanal and small-scale gold mining** • Facilitate the involvement of banks and other financial institutions in financing ASM gold production and marketing activities. • Enhance the technical skills (extraction, processing, compliance with social and environmental standards) and organisational skills (administration, accounting, fund management, among others) of artisanal miners, cooperatives and private companies through training. • Develop and disseminate "practical manuals" in local languages on the steps involved in complying with current regulations.[432] • Reserve areas or lanes for artisanal and small-scale gold mining. • Facilitate coexistence between artisanal or small-scale gold mines and industrial or semi-industrial gold mines.
	Tax harmonisation • Ensure that taxes on gold imports and taxes on gold exports are identical in all countries in a region, or even on the continent.
	Increased and tighter controls • Reinforce border and airport controls to combat gold smuggling • Fight corruption, which lies at the heart of smuggling. Introduce bonuses for customs seizures; increase penalties for officers convicted of corruption and require customs officers and their families to declare their assets.[433] • Regulate the carriage of gold in hand luggage. • Increase the scale and frequency of checks carried out by state agencies on mining sites, collectors, purchasing offices and refineries. • Improve the verification of customs declarations in order to detect customs under-declarations by checking whether the value and quantities declared correspond (in terms of the price of gold).
	Incorporation of the requirements of the OECD Guidance into the national legal framework[434] • Require all players in the supply chain at national level to comply with all the requirements of the OECD Guidance.
	Coherence of state action • Co-ordinate the activities of the various government agencies involved in supervising the production and marketing of gold and the activities of gold miners, collectors and buying offices at local and national level.

GENERAL RECOMMENDATIONS	**Gold marketing** • Set up decentralised gold collection and service offices, e.g. like the trading hubs in Tanzania.[435] • Simplify and streamline administrative procedures for gold exports. • Lower the threshold for non-declaration of gold exported by individuals. In the case of Mali, the NGO Pact proposed a threshold of between 25 and 50 grams (instead of 500 grams).[436] • For countries with a gold purchasing programme run by a state agency, e.g. the central bank: offer competitive prices, ensure sufficient liquidity, put in place appropriate due diligence mechanisms, require that part of the revenue generated be redistributed to the mining regions.[437]
	Cooperation with destination countries • Contact the authorities in the destination countries and work with them to detect the origin of discrepancies in customs statistics and identify the players involved in the illegal gold trade.
	Good management of natural resources and transparency of trade in this field • Join the EITI. • Adhere to the Minamata Convention on Mercury. • In the case of the member countries of the International Conference on the Great Lakes Region (ICGLR), implement the recommendations made at the Khartoum workshop.[438]

RECOMMENDATIONS ON THE PUBLICATION OF INFORMATION	**Gold production statistics** • Publish monthly and annual statistics on the quantities of gold extracted, disaggregated by region of the country, by type of gold (e.g. from artisanal and small-scale mines or industrial and semi-industrial mines) and by company. • Abandon the method of presenting export figures as production figures.
	Gold trading statistics • Publish monthly and annual statistics on exported and imported gold, indicating both weight and value, broken down by country of destination or origin and by type of gold (artisanal, industrial, monetary, reprocessed ("recycled")). • Report gold exports and imports to UN Comtrade.
	Consistency of statistics • Harmonise official data collection methods, to avoid state agencies publishing divergent data. • Coordinate the activities of government agencies responsible for producing and publishing data on the gold sector and organise validation workshops before publication of the data. • Use the calendar year as the reference period in annual reports and other such documents; avoid any other reference period (e.g. the financial year).
	Documentation of statistical discrepancies • Report discrepancies between production, exports and imports into partner countries: analyse them, investigate their origin and publish the results, e.g. in an annual report, to identify possible illicit gold flows. This recommendation is partly consistent with requirement 3.3 b) of the EITI standard.[439]

RECOMMENDATIONS ON THE PUBLICATION OF INFORMATION	**Increase in the amount of information available on the sector** • Publish a list of refineries, buying offices and all companies with an export licence. Require these companies to provide state agencies with data on the origins, quantities, values and destinations of the gold processed. This recommendation is similar to that made in a GIABA report on ECOWAS countries.[440] • Carry out a study of total ASM gold production based on a sound methodology and leading to a realistic estimate of this production (by region). This recommendation is in line with requirement 3.2 a) of the EITI standard.[441] • Carry out a study of undeclared exports of ASM gold based on a sound methodology and leading to a realistic estimate of these exports. This recommendation is in line with requirement 3.3 a) of the EITI standard.[442] • Map the distribution of artisanal and small-scale gold mining sites and the corresponding financial flows. • Provide easily accessible and reliable geological data.[443]

SPECIFIC RECOMMENDATIONS TO THE SOUTH AFRICAN STATE	• Abandon the strict special trade system and adopt instead the general trade system, in accordance with the United Nations recommendations.[444] • Publish the countries of destination of exported gold and the countries of origin of imported gold.

TO NON-AFRICAN STATES

GENERAL RECOMMENDATIONS	• Publish the identity of the countries of origin and the countries of dispatch of imported gold. • For all customs declarations, check that dividing the declared value of the gold by the declared quantity gives a realistic price for the gold, in order to detect any under-declarations. • Adopt national legislation that incorporates all the requirements of the OECD Guidance. • Check that imported gold has been declared for export in the country of origin. • Collaborate with the organisations responsible for private standards (e.g. the LBMA) and compare customs statistics with the data published by these organisations. • Work with the authorities in exporting countries to identify any illicit gold flows. • Increase development cooperation, in particular the number of projects supporting the formalisation of ASM.

SPECIFIC RECOMMENDATIONS TO THE EMIRATI STATE	• Strengthen customs controls on gold imports, in particular to ensure that the gold has been correctly declared in the country where it was mined. • Implement the recommendations resulting from the WGC and DMCC initiative on the transport of gold in hand luggage, in order to regulate this practice. • Create tariff sub-codes for gold imports. • Subject companies meeting the definition of DPMS to all the requirements of the *Due Diligence Regulations for Responsible Sourcing of Gold*, in particular the requirement to publish reports. • Require all DPMS, including refineries, to publish the true origin of imported gold. • Disclose the identity of the countries of dispatch of imported gold and report this information to UN Comtrade.

SPECIFIC RECOMMENDATIONS TO THE SWISS STATE	• Amend the PMCA and PMCO and bring them into line with the OECD Guidance. • Require disclosure of the true country of origin for gold imports with key 912 (7108.12) other than LBMA ingots. • Subject banks and trading companies active in gold trading to a due diligence obligation based on the OECD Guidance. • Publish the COPMC's audit reports on holders of the melter and trade assayer licence.

TO THE EITI AND ITS NATIONAL CHAPTERS

- Make mandatory requirement 3.3 b) of the EITI Standard 2023 relating to the justification of discrepancies between the country's gold exports and partner countries' gold imports.[445]
- Make mandatory requirement 3.3 e) of the EITI 2023 standard relating to information to be declared for exports.[446]
- Justify statistical gaps in cases where several state agencies in the same country give different figures for gold production or exports.
- Check that dividing the declared value of the gold by the declared quantity gives a realistic price for the gold (*or doré*), to detect any customs under-declarations.
- Publish member countries' annual reports according to the calendar year (rather than the fiscal year).

TO THE WORLD CUSTOMS ORGANISATION

- Create tariff sub-codes for the gold trade, to better distinguish between types of gold. This could be done, for example, by accepting the proposal put forward by the Swiss authorities.[447]

TO UNSD (UN COMTRADE)

- Encourage states that do not report gold trade statistics to UNSD to do so.
- Require all states to transmit their data within a maximum period of one year.
- Ensure that data on the gold trade transmitted by the states contains no gaps, obvious errors or aberrations. If necessary, ask states to complete or correct the data.
- Require all states to disclose the identity not only of the countries of origin but also of the countries of dispatch of imported gold.

TO THE EUROPEAN UNION

- Include in the list of CAHRAs the countries through which conflict gold transits.

TO THE LBMA

- Require member refineries to disclose the identity of the mines and suppliers from which they obtain their supplies.
- Require member refineries to report their data by calendar year.
- Work with the authorities in gold-producing countries and the main gold trading centres.
- Publish information on the origin of gold by refinery.
- Check refinery declarations and cross-check them with production and export data from producing countries.

TO AFRICAN GOLD COLLECTORS, PURCHASING AGENCIES AND REFINERIES

- Comply with the OECD Guidance, submit to external audits and publish annual reports.
- Set up traceability mechanisms.
- Report annually to the state the identity of the mining sites from which the gold originates and, for each site, the quantities, values and degrees of purity of the gold purchased, as well as the quantities and values of the gold sold, indicating the names of the buyers and the countries of destination.

TO NON-AFRICAN GOLD REFINERIES AND TRADING COMPANIES

- Comply with the requirements of the OECD Guidance.
- Sourcing ASM gold directly from the countries where it is produced.
- Disclose the identity of the mines from which supplies are obtained.
- Disclose the quantities of fine gold and raw gold processed, as Rand Refinery and The Perth Mint already do.[448]
- Ensure that imported gold has been declared for export and that there has been no under-declaration (declared commercial value too low in relation to the declared weight and price of the gold).
- Ensure that imported gold has been mined in the country from which it was exported, or that it has been refined by a company able to prove its origin.

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58 Total gold exports from African countries (771) - exports from South Africa (91.5) = 679.5. Total imports of gold from Africa into non-African countries (1300) - corrected imports of gold from South Africa (321.2) + declared gold exports from African countries to South Africa (138) = 1'116. 1'116 - 679.5 = 437.

59 When gold imports declared by non-African countries as coming from South Africa are higher than gold production and gold imports into South Africa, it is quite possible that the difference is artificial. This was the case in 2022: the former (321 tonnes) were 98 tonnes higher than the latter (223 tonnes). We can assume that these 98 tonnes represent part of the 159 tonnes of gold imported into China in 2022 and declared as coming from South Africa, but which was most likely shipped from another country. Subtracting 98 tonnes from the gap between imports of gold from Africa into non-African countries and exports of gold from African countries gives 435 tonnes. It should be noted, however, that the calculation would be different if we took into account ASM gold production in South Africa, estimated at 25 tonnes per year, and if we assumed that all of this gold had been exported. In this case, the total production and import of gold into South Africa would be 248 tonnes (instead of 223 tonnes) and the difference would be 73 tonnes (instead of 98 tonnes).

60 Calculated on the basis of the gold price on 1 May 2024 at 2:15 pm (73,862 USD/kg; https://www.cours-or.ch/cours-de-l-or/) and taking into account an average exported gold purity of 95,5%. This figure is an average of the estimated purity of African gold imported into the UAE between 2012 and 2022 (the UAE being the primary destination for African EMAPE gold). It was calculated by dividing the value of the gold by the weight of gold imported into the UAE from African countries, then calculating the percentage in relation to the annual gold price.

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313 *Ibid.*

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315 UNSD's response to SWISSAID, 11 April 2022.

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APPENDICES

***General note :** The data taken into account in this report is that which was available at the time the report was finalised. Data with a fiscal year as the reference period (e.g. July 2017-June 2018) has been attributed to the most recent calendar year (in this case, 2018).*

Appendix 1: Total declared gold production in all African countries

Algeria	• 2012-2018: Office National des Statistiques (*L'Algérie en quelques chiffres*, e.g. https://www.ons.dz/IMG/pdf/aqc2016-2018ed2021-fr.pdf). • 2019-2021: Ministère de l'Energie et des Mines (quoted in press articles). • 2022: no data. The Ministère de l'Energie et des Mines, the Office National des Statistiques and the Office national des statistiques et l'Agence Nationale pour la Transformation et la Distribution de l'Or et des Autres Métaux Précieux did not provide SWISSAID with the requested data.
Angola	• 2012-2018: no data. The Ministério dos Recursos Minerais, Petróleo e Gás, the Agência Nacional de Recursos Minerais and the Instituto Nacional de Estatísticas have not provided SWISSAID with the requested data. • 2019-2022: Ministério dos Recursos Minerais, Petróleo e Gás (cited in press articles and own communications, e.g. https://mirempet.gov.ao/ao/noticias/producao-de-ouro-regista-aumento-em-2022/).
Benin	• 2012-2019 : Direction Générale des Mines (data sent to SWISSAID on 13 October 2023). • 2020-2022: no data available. The Direction Générale des Mines confirmed this in a response to SWISSAID on 26 October 2023.
Botswana	• 2012-2022: Statistics Botswana (*Index of the physical volume of mining production*, e.g. https://www.statsbots.org.bw/sites/default/files/Index%20Of%20The%20Physical%20Volume%20Of%20Mining%20Production%20Fourth%20Quarter%202022.pdf).
Burkina Faso	• 2012-2022: Direction Générale des Mines et de la Géologie/Agence Nationale d'Encadrement des Exploitations Minières Artisanales et Semi-Mécanisé (*Annuaire statistique du Ministère de l'énergie, des mines et des carrières*, e.g. http://cns.bf/IMG/pdf/annuaire_statistique_2022_memc0001.pdf).
Burundi	• 2012-2021: Ministère de l'Hydraulique, de l'Energie et des Mines (*Annuaire statistique du Burundi*, e.g. https://www.insbu.bi/wp-content/uploads/2023/04/Annuaire-Statistique-du-Burundi-2021vf.pdf). • 2022: no data. The L'Office burundais des Mines et Carrières has not provided SWISSAID with the requested data.
Cameroon	• 2013-2021: Ministère des Mines, de l'Industrie et du Développement Technologique (*Annuaire statistique*, e.g. https://www.minmidt.cm/wp-content/uploads/2023/08/ANNUAIRE-STATISTIQUE-MINMIDT-2022-FR.pdf). • 2012 and 2022: no data. The Ministère des Mines, de l'Industrie et du Développement Technologique has not provided SWISSAID with the requested data.
CAR	• 2012-2018 : Bureau d'Evaluation et de Contrôle du Diamant et de l'Or, Ministères des Mines et de la Géologie (cited in IPIS, https://ipisresearch.be/mapping/webmapping/resources/img_publications/AMPR_IPIS_ASM_Mapping_Western_CAR_English.pdf). • 2019-2020: Institut Centrafricain des Statistiques, des Etudes Economiques et Sociales (cited in ITIE RCA 2020, https://eiti.org/sites/default/files/2023-02/CAR%202020%20EITI%20Report.pdf). • 2021-2022: no data. The Bureau d'Evaluation et de Contrôle du Diamant et de l'Or has not provided SWISSAID with the requested data.
Chad	• 2020-2021: Ministère des Mines et de la Géologie (data sent to SWISSAID on 26 January 2022). • 2012-2019 and 2022 : The Ministère des Mines et de la Géologie has not provided SWISSAID with data for these years.
Côte d'Ivoire	• 2012-2022: Ministère des Mines, du Pétrole et de l'Energie (formerly Ministère des Mines et de la Géologie) (data sent to SWISSAID on 21 September 2023; *Bilan du secteur minier*, e.g. http://mines.gouv.ci/wp-content/uploads/2021/03/CCM%20BILAN%202020.pdf; data quoted in press articles).

DRC	• 2012-2022: Ministère des Mines (*Statistiques minières*, https://mines.gouv.cd/fr/statistiques/).
Egypt	• 2012-2014: U.S. Geological Survey. The Ministry of Petroleum and Mineral Resources and the Central Agency for Public Mobilization and Statistics did not provide SWISSAID with the requested data. • 2015-2022: Centamin (e.g. https://www.centamin.com/assets/sukari-gold-mine/).
Eritrea	• 2012-2021: U.S. Geological Survey. The Ministry of Energy and Mines has not provided SWISSAID with the requested data. • 2022: no data. The Ministry of Energy and Mines has not provided SWISSAID with the requested data.
Ethiopia	• 2012/13-2016/17: Ethiopian Extractives Industries Transparency Initiative (https://eiti.org/countries/ethiopia). • 2017/18-2019/20: Ministry of Mines and Petroleum (e.g. http://www.mom.gov.et/index.php/mining/learn-more-about-ethiopias-mining-sector/). • 2021-2022: no data. The Ministry of Mines and Petroleum and the National Bank of Ethiopia have not provided SWISSAID with the requested data.
Gabon	• 2012-2020 : Direction Générale de l'Economie et de la Politique Fiscale (*Tableau de bord de l'économie*, e.g. https://www.lafeg.ga/uploads/file_2_20230404072356_79ldpr79kbhl7hlstp04d2bgk0.pdf). • 2021 : Direction Générale des Mines et de la Géologie (data published in Gabon EITI reports: https://www.itiegabon.ga/object.getObject.do?id=4536). • 2022: no data. The Ministère des Mines has not provided SWISSAID with the requested data.
Ghana	• 2012-2015: Ghana Extractives Industries Transparency Initiative (https://eiti.org/countries/ghana). • 2016-2022: Minerals Commission (https://www.mincom.gov.gh/industry-statistics/, data received on 20 October 2023), Ghana Chamber of Mines (*Performance of the Mining Industry*, https://ghanachamberofmines.org/media-centre/our-publications/).
Guinea	• 2012-2022: Ministère des Mines et de la Géologie (*Bulletin de statistiques minières*, https://www.stat-guinee.org/index.php/autres-publications-ssn/109-ministere-des-mines-et-de-la-geologie).
Kenya	• 2012-2022: Kenya National Bureau of Statistics (*Economic Survey*, e.g. https://www.knbs.or.ke/wp-content/uploads/2021/09/Economic-Survey-2021.pdf).
Liberia	• 2012-2022: Central Bank of Liberia (*Annual Reports*, https://www.cbl.org.lr/publications/document-type/cbl-annual-reports).
Mali	• 2012-2020 : Direction Nationale de la Géologie et des Mines, ITIE Mali (https://eiti.org/countries/mali). • 2021-2022: Ministère des Mines (cited in press articles).
Morocco	• 2012-2022 (except 2016, data not available) : Direction des Mines et des Hydrocarbures (data sent to SWISSAID on 1 November 2023)
Mauritania	• 2012-2022: EITI Mauritania (https://eiti.org/fr/node/22060).
Mozambique	• 2012-2021: Ministério dos Recursos Minerais e Energia, ITIE Moçambique (https://eiti.org/countries/mozambique). • 2022: Unidade de Gestão do Processo Kimberley, Metais Preciosos e Gemas (quoted in a press article).
Namibia	• 2012-2021: Bank of Namibia (*Annual Reports*, https://www.bon.com.na/Economic-information/Annual-Reports.aspx). • 2022: Chamber of Mines (*Annual Review*, https://chamberofmines.org.na/wp-content/uploads/2023/04/2022-Chamber-of-Mines-Annual-Review.pdf).
Niger	• 2012-2022: Ministère des Mines (data sent to SWISSAID on 8 August 2023).
Nigeria	• 2012-2022: Ministry of Mines and Steel Development (data sent to SWISSAID on 6 October 2023).

Republic of Congo	• 2012-2016: no data available. The Ministère des Industries Minières et de la Géologie confirmed this in a response to SWISSAID on 23 November 2023. • 2017-2018: Institut National de la Statistique (*Annuaire statistique*, https://ins-congo.cg/annuaire-statistique/). • 2019-2022: Ministère des Industries Minières et de la Géologie (data sent to SWISSAID on 23 November 2023).
Senegal	• 2012-2022: Ministère des Mines et de la Géologie (*Statistiques minières*, https://www.minesgeologie.gouv.sn/?page_id=1447), ITIE Senegal (https://eiti.org/countries/senegal).
Sierra Leone	• 2012-2021: EITI Sierra Leone (https://eiti.org/countries/sierra-leone). • 2022: no data. Sierra Leone's EITI 2022 report had not yet been published at the time SWISSAID finalised its report.
South Africa	• 2012-2022: Department of Mineral Resources and Energy (data sent to SWISSAID on 21 February 2022), Minerals Council (*Facts and figures*, https://www.mineralscouncil.org.za/industry-news/publications/facts-and-figures).
Sudan	• 2012-2021: Central Bank of Sudan (*Annual Reports*, https://cbos.gov.sd/en/periodicals-publications?field_publication_type_tid_i18n=43). • 2022: Sudanese Mineral Resources Company (https://mininfo.gov.sd/sudan-gold-production-in-2022-amounted-to-41-8-tons/?lang=en).
Tanzania	• 2012-2022: Bank of Tanzania (*Annual Reports*, https://www.bot.go.tz/Publications/Filter/34).
Uganda	• 2012-2013: Uganda Bureau of Statistics (*Statistical Abstract*, https://www.ubos.org/?pagename=explore-publications&p_id=74). • 2014-2022: Ministry of Energy and Mineral Development (*Statistical Abstract*, https://memd.go.ug/reports/).
Zambia	• 2012-2022: Ministry of Finance and National Planning (*Annual Economic Report*, e.g. https://www.cabri-sbo.org/uploads/files/Documents/zambia_2016_execution_external_year-end_report_ministry_of_finance_comesa_sadc_english_.pdf).
Zimbabwe	• 2012-2022: Reserve Bank of Zimbabwe (*Annual Reports*, https://www.rbz.co.zw/index.php/publications-notices/publications/annual-reports).

Thirty-five African countries have declared gold production. Egypt and Eritrea are among them, but SWISSAID has not found any official statistics on gold production in these countries. The organisation has therefore used other data, deemed realistic, as a reference, namely that of the U.S. Geological Survey and mining companies.

For 19 African countries, SWISSAID has not found any official data and has not received any figures from the authorities. The authorities of some of these countries have confirmed to SWISSAID that they do not have statistics on declared gold production. This concerns: Madagascar, Malawi, Somalia, South Sudan and Togo. For the other countries producing gold, SWISSAID has not found any official data and has not received any figures from the authorities. This concerns: Eswatini, Equatorial Guinea, Libya and Rwanda. Finally, several African countries have no gold production or gold production of less than 100 kg per year. This concerns: Cape Verde, Comoros, Djibouti, Gambia, Guinea-Bissau, Lesotho, Mauritius, Sao Tome and Principe, Seychelles and Tunisia.

Appendix 2: Industrial and semi-industrial gold production in all African countries

Botswana	• 2012-2022: Statistics Botswana (Index of the physical volume of mining production, e.g. https://www.statsbots.org.bw/sites/default/files/Index%20Of%20The%20Physical%20Volume%20Of%20Mining%20Production%20Fourth%20Quarter%202022.pdf).
Burkina Faso	• 2012-2022: Direction Générale des Mines et de la Géologie (*Annuaire statistique du Ministère de l'énergie, des mines et des carrières*, e.g. http://cns.bf/IMG/pdf/annuaire_statistique_2022_memc0001.pdf).
Cameroon	• 2012-2013: EITI Cameroon (https://eiti.org/fr/node/22046). • 2014-2022: no data for industrial and semi-industrial gold production.
Côte d'Ivoire	• 2012-2022: Ministère des Mines, du Pétrole et de l'Energie (formerly Ministère des Mines et de la Géologie) (*Bilan du secteur minier*, e.g. http://mines.gouv.ci/wp-content/uploads/2021/03/CCM%20BILAN%202020.pdf; data cited in press articles).
DRC	• 2012: no disaggregated data (Ministère des Mines). • 2013-2022: Ministère des Mines (*Statistiques minières*, https://mines.gouv.cd/fr/statistiques/).
Egypt	• 2012-2014: U.S. Geological Survey. The Ministry of Petroleum and Mineral Resources and the Central Agency for Public Mobilization and Statistics did not provide SWISSAID with the requested data. • 2015-2022: Centamin (e.g. https://www.centamin.com/assets/sukari-gold-mine/).
Ethiopia	• 2012/13-2016/17: Ethiopian Extractives Industries Transparency Initiative (https://eiti.org/countries/ethiopia). • 2017/18-2019/20: Ministry of Mines and Petroleum (e.g. http://www.mom.gov.et/index.php/mining/learn-more-about-ethiopias-mining-sector/). • 2021-2022: no data. The Ministry of Mines and Petroleum has not provided SWISSAID with the requested data.
Gabon	• 2012-2020: Direction Générale de l'Economie et de la Politique Fiscale (*Tableau de bord de l'économie*, e.g. https://www.lafeg.ga/uploads/file_2_20230404072356_79ldpr79kbhl7hlstp04d2bgk0.pdf). • 2021: Direction Générale des Mines et de la Géologie (data published in Gabon EITI reports: https://www.itiegabon.ga/object.getObject.do?id=4536). • 2022: no data. The Ministère des Mines has not provided SWISSAID with the requested data.
Ghana	• 2012-2015: Ghana Extractives Industries Transparency Initiative (https://eiti.org/countries/ghana). • 2016-2022: Minerals Commission (https://www.mincom.gov.gh/industry-statistics/, data received on 20 October 2023), Ghana Chamber of Mines (*Performance of the Mining Industry*, https://ghanachamberofmines.org/media-centre/our-publications/).
Guinea	• 2012-2022: Ministère des Mines et de la Géologie (*Bulletin de statistiques minières*, https://www.stat-guinee.org/index.php/autres-publications-ssn/109-ministere-des-mines-et-de-la-geologie).
Kenya	• 2012-2022: Kenya National Bureau of Statistics (*Economic Survey*, e.g. https://www.knbs.or.ke/wp-content/uploads/2021/09/Economic-Survey-2021.pdf).
Liberia	• 2012-2016: no industrial gold production (p. 18 https://www.cbl.org.lr/sites/default/files/documents/annualreport_2017.pdf). • 2017-2021: Ministry of Mines and Energy (published in the Liberia Extractive Industries Transparency Initiative reports, https://eiti.org/countries/liberia). • 2022: no data. The data was not yet available at the time of publication of the SWISSAID report.
Mali	• 2012-2020 : Direction Nationale de la Géologie et des Mines, ITIE Mali (https://eiti.org/countries/mali). • 2021-2022: Ministère des Mines (quoted in press articles).
Morocco	• 2012-2022 (except 2016) : Direction des Mines et des Hydrocarbures (data sent to SWISSAID on 1 November 2023).
Mauritania	• 2012-2022 : ITIE Mauritanie (https://eiti.org/fr/node/22060).

Mozambique	• 2012-2021: no industrial gold production (p. 9 https://www.theigc.org/sites/default/files/2021/06/Hilson-et-al-June-2021-Final-report.pdf). • 2022: Xtract Resources PLC (p. 24 https://xtractresources.com/wp-content/uploads/Xtract-Resources-AR2022.pdf).
Namibia	• 2012-2021: Bank of Namibia (*Annual Reports*, https://www.bon.com.na/Economic-information/Annual-Reports.aspx). • 2022: Chamber of Mines (*Annual Review*, https://chamberofmines.org.na/wp-content/uploads/2023/04/2022-Chamber-of-Mines-Annual-Review.pdf).
Niger	• 2012-2022: Ministère des Mines (data sent to SWISSAID on 8 August 2023).
Nigeria	• 2012-2020: no industrial gold production. • 2021-2022: Thor Explorations LTD (e.g. https://thorexpl.com/site/assets/files/2663/thx_rns_ye-q4_december_31_2022_010523_press_release.pdf).
Senegal	• 2012-2022: Ministère des Mines et de la Géologie (*Statistiques minières*, https://www.minesgeologie.gouv.sn/?page_id=1447), ITIE Senegal (https://eiti.org/countries/senegal).
Sierra Leone	• 2012-2019: no industrial gold production (e.g. p. 35 https://eiti.org/sites/default/files/attachments/final_sleiti_report_for_2017_and_2018.pdf). • 2020-2021: EITI Sierra Leone (https://eiti.org/countries/sierra-leone). • 2022: no data. Sierra Leone's EITI 2022 report had not yet been published at the time SWISSAID finalised its report.
South Africa	• 2012-2022: Department of Mineral Resources and Energy (data sent to SWISSAID on 21 February 2022), Minerals Council (*Facts and figures*, https://www.mineralscouncil.org.za/industry-news/publications/facts-and-figures).
Sudan	• 2012-2014, 2017-2022 : Total gold production has not been disaggregated by type of gold. • 2015-2016: Central Bank of Sudan (*Annual Reports*, e.g. https://cbos.gov.sd/sites/default/files/Central%20Bank%20of%20Sudan%20Annual%20Report%202015_0.pdf).
Tanzania	• 2012/13-2020/21: Tanzania Extractive Industries Transparency Initiatives (https://eiti.org/countries/tanzania). The data from this source for the years 2016/17 and 2017/18 do not distinguish between industrial and artisanal gold production. However, comparison with the Mining Commission data for these years shows that the share attributable to ASM production is insignificant. • 2021/22: Mining Commission (Ministry of Minerals) (*Annual report*, https://www.tumemadini.go.tz/wp-content/uploads/Mining-Commission-Annual-Report-2021-2022-1.pdf).
Zambia	• 2012-2022: Ministry of Finance and National Planning (*Annual Economic Report*, e.g. https://www.cabri-sbo.org/uploads/files/Documents/zambia_2016_execution_external_year-end_report_ministry_of_finance_comesa_sadc_english_.pdf).
Zimbabwe	• 2012-2022: Reserve Bank of Zimbabwe (*Monetary Policy Statement*, https://www.rbz.co.zw/index.php/monetary-policy/monetary-policy-statements).

Twenty-six African countries have declared industrial and/or semi-industrial gold production. Although there is information on gold production of this type in some countries such as Algeria, Eritrea and CAR, these countries do not appear in the above list because SWISSAID has not found any official figures on this type of production or received any from the authorities of these countries.

Appendix 3: Declared artisanal and small-scale gold production in all African countries

Benin	• 2012-2019: Direction Générale des Mines (data sent to SWISSAID on 13 October 2023). • 2020-2022: no data. "There have been no production declarations registered with the Mining Administration" (Direction Générale des Mines's response to SWISSAID, 26 October 2023).
Burkina Faso	• 2012-2022: Direction Générale des Mines et de la Géologie/Agence Nationale d'Encadrement des Exploitations Minières Artisanales et Semi-Mécanisées (*Annuaire statistique du Ministère de l'énergie, des mines et des carrières*, e.g. http://cns.bf/IMG/pdf/annuaire_statistique_2022_memc0001.pdf).
Cameroon	• 2013-2021: Ministère des Mines, de l'Industrie et du Développement Technologique (*Annuaire statistique*, e.g. https://www.minmidt.cm/wp-content/uploads/2023/08/ANNUAIRE-STATISTIQUE-MINMIDT-2022-FR.pdf). • 2012 and 2022: no data. The Ministère des Mines, de l'Industrie et du Développement Technologique has not provided SWISSAID with the requested data.
CAR	• 2012-2018 : Bureau d'Evaluation et de Contrôle du Diamant et de l'Or, Ministères des Mines et de la Géologie (cited in IPIS, https://ipisresearch.be/mapping/webmapping/resources/img_publications/AMPR_IPIS_ASM_Mapping_Western_CAR_English.pdf). • 2019-2020: Institut Centrafricain des Statistiques, des Etudes Economiques et Sociales (ICAAES) (cited in ITIE RCA 2020, https://eiti.org/sites/default/files/2023-02/CAR%202020%20EITI%20Report.pdf). • 2021-2022: no data. The Bureau d'Evaluation et de Contrôle du Diamant et de l'Or has not provided SWISSAID with the requested data.
Chad	• 2020-2021: Ministère des Mines et de la Géologie (data sent to SWISSAID on 26 January 2022). • 2012-2019 and 2022: the Ministère des Mines et de la Géologie has not provided SWISSAID with the requested data for these years.
Côte d'Ivoire	• 2012-2018: no data available. The Ministère des Mines, du Pétrole et de l'Energie confirmed this to SWISSAID on 21 September 2023. • 2019-2020: ITIE Côte d'Ivoire (https://eiti.org/countries/cote-divoire). • 2021-2022: Ministère des Mines, du Pétrole et de l'Energie (data sent to SWISSAID on 21 September 2023).
DRC	• 2012: no data. Total gold production has not been disaggregated by type of gold. • 2013-2022: Ministère des Mines (*Statistiques minières*, https://mines.gouv.cd/fr/statistiques/).
Ethiopia	• 2011/12-2018/19: Ethiopian Extractives Industries Transparency Initiative (https://eiti.org/countries/ethiopia). • 2020-2022: no data. Ethiopia has been suspended by the EITI and the latest EITI report covers the years 2018/2019; the Ministry of Mines and Petroleum and the National Bank of Ethiopia have not provided SWISSAID with the requested data.
Ghana	• 2012-2015: Ghana Extractives Industries Transparency Initiative (https://eiti.org/countries/ghana). • 2016-2022: Minerals Commission (https://www.mincom.gov.gh/industry-statistics/, data received on 20 October 2023), Ghana Chamber of Mines (Performance of the Mining Industry, https://ghanachamberofmines.org/media-centre/our-publications/).
Liberia	• 2011/12-2017/18: no data disaggregated by type of production (Liberia Extractive Industries Transparency Initiative and Central Bank of Liberia). • 2018/19-2020/21: Liberia Extractive Industries Transparency Initiative (https://eiti.org/countries/liberia). • 2021/22: the data was published after the deadline for SWISSAID to take the data into account (https://eiti.org/sites/default/files/2024-01/Official%20Liberia%2015th%20EITI%20Report.pdf).
Mali	• 2012-2020 : Direction Nationale de la Géologie et des Mines, ITIE Mali (https://eiti.org/countries/mali). • 2021-2022: Ministère des Mines (cited in press articles).
Mauritania	• 2012-2017: no data. • 2018-2022: EITI Mauritania/Maaden Mauritania (https://eiti.org/countries/mauritania).

Mozambique	• 2012-2021: Ministério dos Recursos Minerais e Energia, ITIE Moçambique (https://eiti.org/countries/mozambique). • 2022: Unidade de Gestão do Processo Kimberley, Metais Preciosos e Gemas (quoted in a press article).
Niger	• 2012-2022: Ministère des Mines (data sent to SWISSAID on 8 August 2023).
Nigeria	• 2012-2022: Ministry of Mines and Steel Development (data sent to SWISSAID on 6 October 2023). For the years 2021 and 2022, industrial gold production has been subtracted from total gold production to obtain the figure for artisanal gold production.
Republic of Congo	• 2012-2016: no data. The Ministère des Industries Minières et de la Géologie confirmed this in a response to SWISSAID on 23 November 2023. • 2017-2018: Institut National de la Statistique (*Annuaire statistique*, https://ins-congo.cg/annuaire-statistique/). • 2019-2022: Ministère des Industries Minières et de la Géologie (data sent to SWISSAID on 23 November 2023).
Sierra Leone	• 2012-2021: EITI Sierra Leone (https://eiti.org/countries/sierra-leone). • 2022: no data. Sierra Leone's EITI 2022 report had not yet been published at the time SWISSAID finalised its report.
Sudan	• 2012-2014, 2017-2022: no data. Total gold production has not been disaggregated by type of gold. • 2015-2016: Central Bank of Sudan (*Annual Reports*, e.g. https://cbos.gov.sd/sites/default/files/Central%20Bank%20of%20Sudan%20Annual%20Report%202015_0.pdf).
Tanzania	• 2012, 2014: Tanzania Extractive Transparency Initiative (https://eiti.org/countries/tanzania). • 2013, 2015-2017: no data. • 2018-2022: Ministry of Minerals (*Mining Commission, Performance of Mineral Markets*, https://www.tumemadini.go.tz/statistics/performance-of-mineral-markets/).
Uganda	• 2012-2013: Uganda Bureau of Statistics (*Statistical Abstract*, https://www.ubos.org/?pagename=explore-publications&p_id=74). • 2014-2022: Ministry of Energy and Mineral Development (*Statistical Abstract*, https://memd.go.ug/reports/).
Zambia	• 2021: Zambia Gold Company Limited (https://www.zccm-ih.com.zm/2022/02/16/lets-purify-gold/). • 2012-2020 and 2022: no data. "There are no statistics on the ASM gold production" (Ministry of Mines and Minerals Development's response to SWISSAID, 20 October 2023).
Zimbabwe	• 2012-2022: Reserve Bank of Zimbabwe (*Monetary Policy Statement*, https://www.rbz.co.zw/index.php/monetary-policy/monetary-policy-statements).

Twenty-two African countries have declared ASM gold production.

Four African countries publish figures for total gold production, but these are not broken down by type of gold. The figures for these countries have therefore not been included above. This concerns: Algeria, Burundi, Gabon and Angola.

Fifteen African countries have ASM gold production, but no official statistics on this subject. The authorities of some of these countries have confirmed to SWISSAID that they have no declared ASM gold production statistics. This concerns: South Africa, Guinea, Kenya, Madagascar, Malawi, Senegal, Somalia, South Sudan and Togo. For the other countries producing ASM gold, SWISSAID has not found any official statistics and has not received any from the authorities. This concerns: Egypt, Eritrea, Eswatini, Equatorial Guinea, Libya and Rwanda.

Thirteen African countries have no ASM gold production or gold production from this sub-sector of less than 100 kg per year. These countries are: Botswana, Cape Verde, Comoros, Djibouti, Gambia, Guinea-Bissau, Lesotho, Mauritius, Morocco, Namibia, Sao Tome and Principe, Seychelles and Tunisia.

Appendix 4: Undeclared artisanal and small-scale gold production in all African countries

For some African countries, there are several estimates of ASM gold production. Estimates not mentioned below can be found in SWISSAID's country-specific analyses (see www.africangoldreport.org). The authors of this study have assessed the methodologies employed and have relied on the opinions of experts and stakeholders in order to retain the estimates they consider to be the most reliable. In the few cases where they found only one estimate, they had to include it in their analysis even if they had reservations about its reliability (e.g. Somalia, Republic of Congo).

Angola	• Low estimate: 3,000 kg; this figure is based on a statement by the chairman of the board of the Agência Reguladora do Ouro, 2017, quoted in: https://www.jornaldenegocios.pt/economia/mundo/africa/angola/detalhe/angola-perde-116-milhoes-por-ano-com-garimpo-ilegal-de-ouro. • High estimate: 3,000 kg; (source: see above).
Burkina Faso	• Low estimate: 15,000 kg; OECD, 2018, p. 11, https://mneguidelines.oecd.org/Evaluation-des-chaines-approvisionnement-en-or-produit-au-Burkina-Faso-Mali-Niger.pdf. • High estimate: 30,000 kg; Assemblée Nationale, 2016, p. 62 and 69, https://www.netafrique.net/wp-content/uploads/2016/10/rapport_general_de_commission_enquete_parlementaire_sur_le_minier-1.pdf.
Burundi	• Low estimate: 1,198 kg. This figure corresponds to the total production estimate of 2,061 kg (Ministère de l'Environnement, de l'Agriculture et de l'Elevage, 2019, p. 80, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Burundi-ASGM-NAP-2019.pdf) less official gold production for 2020. • High estimate: 1,500 kg. This figure comes from a SWISSAID estimate based on statements by the authors of the study by the Ministère de l'Environnement, de l'Agriculture et de l'Elevage (2019, p. 80, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Burundi-ASGM-NAP-2019.pdf), who consider the total production estimate (2,061 kg) to be conservative.
Cameroon	• Low estimate: 6,588 kg. This figure corresponds to the estimates of artisanal gold production (948 kg) and semi-mechanised gold production (5,874 kg) in the ARM and CRADEC report (2021, p. 57 and p. 62, https://eiticameroon.org/wp-content/uploads/dlm_uploads/2022/08/Etude-sur-les-filieres-de-commercialisation-de-lor-et-du-diamant-au-Cameroun.pdf) less official gold production for 2020. • High estimate: 6,588 kg (source: see above).
CAR	• Low estimate: 5,668 kg; IPIS, 2019, p. 36, https://ipisresearch.be/mapping/webmapping/resources/img_publications/AMPR_IPIS_ASM_Mapping_Western_CAR_English.pdf. • High estimate: 5,668 kg; (source: see above).
Chad	• Low estimate: 8,254 kg; Analyse sectorielle nationale de l'EMAPE, 2022 , p. 8, https://minamataconvention.org/sites/default/files/2022-08/TCD_7.4.pdf. • High estimate: 8,254 kg; (source: see above).
Côte d'Ivoire	• Low estimate: 30,000 kg; Equal Access International, 2023, p. 29, https://eai1.wpenginepowered.com/wp-content/uploads/2021/03/R4P-ASGM-FR-PRINT.pdf. • High estimate: 40,000 kg; Equal Access International, 2023, p. 29, https://eai1.wpenginepowered.com/wp-content/uploads/2021/03/R4P-ASGM-FR-PRINT.pdf; "it cannot be ruled out that production from ASM may approach or even exceed 40 tonnes" (Ministère des Mines, du Pétrole et de l'Energie's repsonse to SWISSAID, 21 September 2023).
DRC	• Low estimate: 15,000 kg; this figure comes from the low estimate of Germany's Federal Institute for Geosciences and Natural Resources (BGR), quoted in: Impact, 2020, p. 11, https://impacttransform.org/wp-content/uploads/2020/09/The-Intermediaries_Sept-2020_EN-web.pdf. • High estimate: 22,000 kg; this figure comes from the high estimate of Germany's Federal Institute for Geosciences and Natural Resources (BGR), quoted in: Impact, 2020, p. 11, https://impacttransform.org/wp-content/uploads/2020/09/The-Intermediaries_Sept-2020_EN-web.pdf.
Egypt	• Low estimate: 1,000 kg; Egypt Independent, 2017, https://egyptindependent.com/egypt-authorities-arrest-280-illegal-gold-miners-red-sea-desert/. • High estimate: 2,500 kg; Egypt Independent, 2017, https://egyptindependent.com/egypt-authorities-arrest-280-illegal-gold-miners-red-sea-desert/.

Eritrea	• Low estimate: 324 kg; Ministry of Land, Water and Environment (National Action Plan), 2021, p. 9, https://mercuryconvention.org/sites/default/files/documents/national_action_plan/NAP_Eritrea_Final_2021.pdf. • High estimate: 324 kg (source: see above).
Eswatini	• Low estimate: 120 kg; Ministry of Tourism and Environmental Affairs (National Action Plan), 2021, p. 10-11, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Eswatini-ASGM-NAP-2021-EN.pdf. • High estimate: 120 kg (source: see above).
Ethiopia	• Low estimate: 5,821 kg; this figure corresponds to total ASM gold production estimate of 9,000 kg (African Minerals Development Centre, https://knowledge.uneca.org/ASM/Ethiopia) less declared ASM gold production for 2018/2019. • High estimate: 14'822 kg; this figure corresponds to total ASM gold production estimate of 18,000 kg (Ethiopian Extractives Industries Transparency Initiative, 2016, p. 24, http://www.mom.gov.et/wp-content/uploads/2020/02/ASM-Study-Report.pdf) less declared ASM production for 2018/2019.
Gabon	• Low estimate: 1,000 kg; Agence Nationale des Parcs Nationaux, 2021, quoted in https://directinfosgabon.com/le-gouvernement-a-vendu-pour-16-milliard-de-fcfa-dor-but-en-2020/. • High estimate: 2,000 kg; Agence Nationale des Parcs Nationaux, 2021, quoted in https://directinfosgabon.com/le-gouvernement-a-vendu-pour-16-milliard-de-fcfa-dor-but-en-2020/.
Ghana	• Low estimate: 24,000 kg; this figure comes from a SWISSAID estimate based on a percentage of undeclared ASM production of 50% (a very cautious percentage, as some reports mention a percentage of 70% to 80%, e.g. OECD, p. 15 and p.27, https://read.oecd-ilibrary.org/development/illicit-financial-flows_5f2e9dd9-en#page1) calculated on the basis of the estimated total production of ASM (Ministry of Environment, Science, Technology and Innovation, National Action Plan, 2020, p. 12, https://mercuryconvention.org/sites/default/files/documents/national_action_plan/Ghana_ASGM_NAP_Final_March_2022.pdf, the estimate for the 5 districts has been extrapolated to the country as a whole). • High estimate: 30,000 kg; this figure comes from a SWISSAID estimate based on a percentage of undeclared ASM production of 65% (a cautious percentage, as some reports mention a percentage of 70% to 80%, e.g. OECD, p. 15 and p.27, https://read.oecd-ilibrary.org/development/illicit-financial-flows_5f2e9dd9-en#page1) calculated on the basis of the estimate of total ASM production (Ministry of Environment, Science, Technology and Innovation, national action plan, 2020, p. 12, https://mercuryconvention.org/sites/default/files/documents/national_action_plan/Ghana_ASGM_NAP_Final_March_2022.pdf, the estimate for the 5 districts has been extrapolated to the country as a whole).
Guinea	• Low estimate: 16'000 kg; Banque Centrale de la République de Guinée, 2017, quoted in EITI Guinea 2018, 2020, p. 37, https://www.itie-guinee.org/wp-content/uploads/2023/03/Rapport-ITIE-Guinee-2018-version-finale-signe-30122020.pdf. • High estimate: 32,360 kg; Inventaire National EMAPE, 2017-2018, quoted in: Ministère de l'Environnement, des Eaux et des Forêts (Plan d'action national), 2021, p. 7, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Guinea-ASGM-NAP-2021-FR.pdf.
Equatorial Guinea	• Low estimate: 500 kg; U.S. Geological Survey, 2012, https://d9-wret.s3.us-west-2.amazonaws.com/assets/palladium/production/mineral-pubs/country/2012/myb3-2012-ek.pdf. • High estimate: 500 kg (source: see above).
Kenya	• Low estimate: 6,900 kg; Ministry of Environment and Forestry (National Action Plan), 2022, p. 34, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Kenya-ASGM-NAP-2022-EN.pdf. • High estimate: 6,900 kg (source: see above).
Liberia	• Low estimate: 2,000 kg; based on an estimate from a representative of the Ministry of Mines and Energy (obtained by SWISSAID via a sector expert). • High estimate: 4,000 kg; based on figures from the UN Panel of Experts on Liberia in 2013, quoted in: OECD, 2020, p. 16-17, https://www.oecd-ilibrary.org/docserver/5f2e9dd9-en.pdf?expires=1714856324&id=id&accname=guest&checksum=BC9A2ED7816B898E7E042F96928C5D93.

Libya	• Low estimate: 1,000 kg; SWISSAID interview with an expert on Libya, 27 September 2023. • High estimate: 1,000 kg; (source: see above).
Madagascar	• Low estimate: 9,000 kg; this figure comes from the low estimate of the Agence Nationale de la Filière or de Madagascar (response to SWISSAID, 13 October 2023). • High estimate: 14,000; Ministère de l'Environnement, de l'Ecologie et des Forêts (Plan d'action national), 2018, p. 15, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Madagascar-ASGM-NAP-Dec2018-FR.pdf.
Mali	• Low estimate: 30,000 kg; this figure comes from the low estimate of the authorities in charge of the sector, quoted in: OECD, 2018, p. 6, https://mneguidelines.oecd.org/Evaluation-des-chaines-approvisionnement-en-or-produit-au-Burkina-Faso-Mali-Niger.pdf. • High estimate: 57,000 kg; this figure comes from the high estimate of the UN Group of Experts on Mali, United Nations, 2023, p. 26, https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/S_2023_138.pdf.
Mauritania	• Low estimate: 11,240 kg; Maaden Mauritanie and GIZ, 2021, p. 64-65 (this report is cited in Mauritania's EITI 2022 report, https://eiti.org/sites/default/files/2023-10/Rapport2022_2.pdf). • High estimate: 11,240 kg (source: see above).
Mozambique	• Low estimate: 900 kg; this figure comes from the low estimate of the Chamber of Mines of Mozambique (reply to SWISSAID, 2 October 2023). • High estimate: 1,500 kg; this figure comes from the high estimate of the Chamber of Mines of Mozambique (reply to SWISSAID, 2 October 2023).
Niger	• Low estimate: 10,000 kg; OECD, 2018, p. 6, https://mneguidelines.oecd.org/Assessment-of-the-supply-chains-of-gold-produced-in-Burkina-Faso-Mali-Niger.pdf. • High estimate: 15,000 kg; this figure is taken from the high estimate in Crisis Group, 2019, https://www.crisisgroup.org/fr/africa/sahel/burkina-faso/282-reprendre-en-main-la-ruee-vers-lor-au-sahel-central.
Nigeria	• Low estimate: 14,000 kg; PlanetGold, 2021, https://artisanalmining.org/InventoryData/lib/exe/fetch.php/biblio:gef-21.pdf?cache=. • High estimate: 16,260 kg; Federal Ministry of Environment (National Action Plan), 2021, p. 72, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Nigeria_ASGM_NAP_2021_EN.pdf.
South Africa	• Low estimate: 10,000 kg; this figure is based on an estimate of ASM's gold production equivalent to 10% of declared gold production (this percentage was quoted by the Department of Mineral Resources in a response to SWISSAID on 21 February 2022). SWISSAID used the average of declared gold production between 2018 and 2022 to calculate this 10%. • High estimate: 25,000 kg; Enact, 2019, p. 14, https://enact-africa.s3.amazonaws.com/site/uploads/2019-04-24-pulling-the-golden-webs-research-paper.pdf.
Republic of Congo	• Low estimate: 150 kg; U.S. Geological Survey, 2017, p. 18, https://d9-wret.s3.us-west-2.amazonaws.com/assets/palladium/production/atoms/files/myb1-2017-gold.pdf. • High estimate: 150 kg; (source: see above).
Rwanda	• Low estimate: 1,000 kg; based on a low estimate from a player in the Rwandan gold sector (obtained by SWISSAID via a sector expert on 27 November 2023). • High estimate: 2,000 kg; based on a high estimate from a player in the Rwandan gold sector (obtained by SWISSAID via a sector expert on 27 November 2023).
Senegal	• Low estimate: 4,300 kg; Agence Nationale de la Statistique et de la Démographie, 2018, p. 10, https://www.ansd.sn/sites/default/files/2023-05/RAP_RAPPORT%20EMOR%202017%20du%2020%20juillet%202018.pdf. • High estimate: 4,300 kg; (source: see above).

Sierra Leone	• Low estimate: 2,102 kg; this figure comes from the low estimate of the Environment Protection Agency Sierra Leone, p. 119 (p. 10 of Appendix 3), https://cwm.unitar.org/cwmplatformscms/site/assets/files/1162/nationalasgmoverviewsierraleone2019_final-1.pdf. • High estimate: 3,786 kg; this figure comes from the Environment Protection Agency's high estimate for Sierra Leone, p. 119 (p. 10 of Appendix 3), https://cwm.unitar.org/cwmplatformscms/site/assets/files/1162/nationalasgmoverviewsierraleone2019_final-1.pdf.
Somalia	• Low estimate: 300 kg; Horn Observer, 11 November 2022, https://hornobserver.com/articles/1822/Getting-a-grip-on-Somalias-Gold-rush. • High estimate: 300 kg; (source: see above).
South Sudan	• Low estimate: 5,000 kg; Ministry of Mining (reply to SWISSAID on 6 December 2023). • High estimate: 5,000 kg; (source: see above).
Sudan	• Low estimate: 30,000 kg; this figure is derived from ASM's total gold production estimate of 71,000 kg (Higher Council for Environment and Natural Resources, 2021, p. 159, https://minamataconvention.org/sites/default/files/documents/minamata_initial_assessment/MIA-Sudan-2021.pdf) less declared production in 2022. • High estimate: 30,000 kg; (source: see above).
Tanzania	• Low estimate: 2,000 kg; this figure comes from the estimate of total ASM gold production of 20,000 kg (report by a parliamentary committee in 2013, quoted in Reuters, 2019, https://www.reuters.com/article/us-tanzania-mining-artisanal-feature-idUSKBN1X90G0) less the gold production declared in 2021. This is a very conservative estimate. • High estimate: 2,000 kg; (source: see above).
Togo	• Low estimate: 164 kg; Etude d'inventaire du projet plan d'action nationale de l'EMAPE au Togo, 2021, quoted in: Ministère de l'Environnement et des Ressources Forestières, 2022, p. 24, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Togo-ASGM-NAP-2023-FR.pdf. • High estimate: 164 kg; (source: see above).
Uganda	• Low estimate: 2,800 kg; Somo, 2016, p. 6, https://www.stopchildlabour.org/assets/No-golden-future.pdf. • High estimate: 12,695 kg; The National Environment Management Authority (National Action Plan), 2019, p. xiv, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Uganda-NAP-2019.pdf.
Zambia	• Low estimate: 7,142 kg; this figure comes from a SWISSAID calculation based on the estimated gold production of 142 kg, which represents 2% of total ASM gold production, Zambia Environmental Management Agency (National action plan), 2021, p. 88, https://minamataconvention.org/sites/default/files/documents/national_action_plan/Zambia-NAP-2021-EN.pdf. • High estimate: 7,142 kg; (source: see above).
Zimbabwe	• Low estimate: 37,000 kg; this figure corresponds to declared ASM gold production in 2021 multiplied by two. It is based on GI-TOC research estimating that undeclared ASM gold production accounts for half of total ASM gold production. GI-TOC, 2018, p. 6, https://globalinitiative.net/wp-content/uploads/2018/10/Zimbabwe-ASGM_28.04.18_0-1.pdf. • High estimate: 55,000 kg; this figure corresponds to declared ASM gold production in 2021 multiplied by three. It is based on research by the Zimbabwe Environmental Law Association estimating that undeclared ASM gold production represents three-quarters of total ASM gold production (response to SWISSAID on 14 December 2023).

SWISSAID has not found any estimates for only 3 African countries (Algeria, Benin and Malawi) where ASM gold production is known to exist. When contacted by SWISSAID, the authorities in Benin and Malawi replied that there were no estimates for their countries. The Algerian authorities refused to respond.

The African countries where there is no artisanal and small-scale gold mining or where gold production from this sub-sector is less than 100 kg per year are: Botswana, Cape Verde, Comoros, Djibouti, Gambia, Guinea-Bissau, Lesotho, Mauritius, Morocco, Namibia, Sao Tome and Principe, Seychelles and Tunisia.

Appendix 5: Declared gold exports from all African countries

SWISSAID has calculated hypothetical quantities in cases where the data was unrealistic or only available in the form of values (not quantities). SWISSAID has endeavoured to use the most realistic sources. Where such sources were not available at the time of finalising the report, it has had to rely on other sources.

Angola	• 2012-2020: no data. The Ministério dos Recursos Minerais, Petróleo e Gás, the Agência Nacional de Recursos Minerais and the Instituto Nacional de Estatísticas did not provide SWISSAID with the requested data. • 2021-2022: UN Comtrade: HS 7108, https://comtradeplus.un.org/TradeFlow).
Benin	• 2012-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Botswana	• 2012-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Burkina Faso	• 2012-2022 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Burundi	• 2012-2016, 2018-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2017: Banque de la République du Burundi
Cameroon	• 2012-2021 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2022: no data.
CAR	• 2012-2020: Minstère des Mines et de la Géologie (https://mines.gouv.cf/sites/default/files/2019-03/STATISTIQUES%20DIAMANTS%20ET%20OR%202016%20A%20%202018.pdf; cited in Banque des Etats de l'Afrique Centrale: https://www.beac.int/wp-content/uploads/2016/10/debsbe_rca.xlsx). • 2021-2022: no data.
Chad	• 2012-2021: no data. • 2022: Ministère des Mines et de la Géologie (data sent to SWISSAID on 15 September 2023).
Côte d'Ivoire	• 2012-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
DRC	• 2012-2022: Ministère des Mines, Cellule Technique de Coordination et de Planification Minière (*Statistiques minières*, https://ctcpm.cd/fr/la-production/).
Egypt	• 2012-2022: Central Agency for Public Mobilization and Statistics (data sent to SWISSAID on 1 October 2023).
Eswatini	• 2016, 2018-2020: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2012-2015, 2017, 2021-2022: no data.
Eritrea	• 2012-2022: These figures may exist but are not publicly available. SWISSAID has therefore exceptionally replaced them with figures on imports of gold from Eritrea reported by partner countries, which are high (UN Comtrade, HS 7108, https://comtradeplus.un.org/TradeFlow).
Ethiopia	• 2011/12-2021/22: National Bank of Ethiopia (*Annual report*, https://nbe.gov.et/annual-report/).
Gabon	• 2012-2021 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2022: no data.
Ghana	• 2012-2013, 2016-2022: Bank of Ghana (*Annual report*, https://www.bog.gov.gh/publications/annual-report/). • 2014-2015: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow) (for 2014, a hypothetical weight has been calculated based on the value reported to UN Comtrade).
Guinea	• 2012-2022: Ministère des Mines et de la Géologie (*Bulletin de statistiques minières*, https://www.stat-guinee.org/index.php/autres-publications-ssn/109-ministere-des-mines-et-de-la-geologie).
Kenya	• 2012-2015, 2022: Kenya National Bureau of Statistics (Statistical Abstract, e.g. https://www.knbs.or.ke/reports/2021-statistical-abstract/). • 2016-2021: UN Comtrade, hypothetical weights calculated on the basis of values reported to UN Comtrade.

Liberia	• 2012-2022: Central Bank of Liberia (*Annual Report*, https://www.cbl.org.lr/general/all-publications?keys=&field_document_type_target_id%5B%5D=186&items_per_page=25).
Libya	• 2012-2015: no data. • 2016-2019 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2020-2022: Central Bank of Libya (*Libya's Foreign Trade*, https://cbl.gov.ly/en/micifaf/sites/4/2023/11/Foreign-Tarde-Report-2019-2022-2.pdf).
Madagascar	• 2012, 2016-2020 : Agence Nationale de la Filière or Madagascar (data sent to SWISSAID on 18 September and 8 December 2023). • 2013-2015, 2021-2022: no data.
Mali	• 2012, 2016-2018: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2013-2015, 2019-2022: Institut National de la Statistique (data sent to SWISSAID on 5 and 26 July 2023).
Morocco	• 2012-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Maurice	• 2012-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Mauritania	• 2012-2021: EITI Mauritania (https://eiti.org/fr/node/22060). • 2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Mozambique	• 2012-2014, 2016-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2015: no data.
Namibia	• 2012-2021 : Bank of Namibia (*Annual Report*, https://www.bon.com.na/Economic-information/Annual-Reports.aspx). • 2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Niger	• 2012-2014: ITIE Niger (https://eiti.org/countries/niger). • 2015-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Nigeria	• 2012, 2014-2022: Ministry of Mines and Steel Development (data sent to SWISSAID on 9 October 2023). • 2013: no data.
Republic of Congo	• 2016-2021 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2012-2015, 2022: no data.
Rwanda	• 2012-2013: no data. • 2014-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Senegal	• 2012-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Sierra Leone	• 2012-2021: EITI Sierra Leone (https://eiti.org/countries/sierra-leone). • 2022: National Minerals Agency (data sent to SWISSAID on 22 November 2023).
South Africa	• 2012-2022: Department of Trade, Industry and Competition (*Beyond 20/20 tool,* HS 7108, http://tradestats.thedti.gov.za/ReportFolders/reportFolders.aspx.
Sudan	• 2012-2022: Central Bank of Sudan (*Foreign Trade Statistical Digest*, https://cbos.gov.sd/en/periodicals-publications?field_publication_type_tid_i18n=45).
Tanzania	• 2012-2022: Ministry of Finance (2012-2013: *Foreign Trade Statistics*, https://www.nbs.go.tz/nbs/takwimu/trade/Foreign_Trade_Statistics_2013.pdf; 2014-2022: *The Economic Survey*, https://www.mof.go.tz/publications/economic-survey-books).
Togo	• 2012-2020 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2021-2022: no data.
Tunisia	• 2012-2018, 2021 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2019-2020, 2022: no data.

Uganda	• 2012-2021 : Uganda Bureau of Statistics (*Statistical Abstract*, https://www.ubos.org/?pagename=explore-publications&p_id=74). • 2022: Bank of Uganda (*Composition of Exports*, https://bou.or.ug/bouwebsite/Statistics/).
Zambia	• 2012: no data. • 2013-2022: Ministry of Finance (*Annual Economic Report*, https://www.mofnp.gov.zm/?page_id=3285).
Zimbabwe	• 2012-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).

Forty-one African countries report gold exports.

Thirteen African countries do not officially report any gold exports. The authorities in some of these countries have confirmed to SWISSAID that they have no statistics on gold exports from their country. This concerns: Gambia, South Sudan, Djibouti, Somalia and Malawi. For the other countries, SWISSAID has found no official statistics and has received none from the authorities. These include Algeria, Cape Verde, Comoros, Eritrea, Guinea-Bissau, Equatorial Guinea, Lesotho, Sao Tome and Principe and Seychelles.

Appendix 6: Declared gold exports to South Africa

Figure 19 shows gold exports from all African countries to South Africa, while Figure 77 shows gold exports from all countries to South Africa.

FIGURE 19: Declared gold exports from all African countries to South Africa

Botswana	• 2012-2014, 2020-2022 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Burkina Faso	• 2012-2017 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Côte d'Ivoire	• 2012-2022 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
DRC	• 2013-2022: Due to a lack of data, SWISSAID has used total industrial gold exports from the DRC (Ministère des Mines, Statistiques minières, https://mines.gouv.cd/fr/statistiques/). Mining companies Barrick and AngloGold Ashanti have confirmed to SWISSAID that all gold from the Kigali industrial mine (which began production in 2013) is exported to Rand Refinery in South Africa. The gold from the other two industrial mines, whose production is small compared to that of Kigali, was exported to Rand Refinery at least until 2015 (there could be very slight errors between 2016 and 2018 or 2019 as the gold from these two mines may have been exported to China, but the quantities were very small).
Egypt	• 2012-2017 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Eswatini	• 2019-2020 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow)
Gabon	• 2013 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow)
Ghana	• 2012-2022 : Bank of Ghana (data sent to SWISSAID on 12 January 2024).
Guinea	• 2012-2022: Due to a lack of data, SWISSAID used production data from the Siguiri industrial gold mine. The mining company AngloGold Ashanti has confirmed to SWISSAID that all the gold from this mine is exported to Rand Refinery in South Africa.
Kenya	• 2013, 2015-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow) (a hypothetical weight has been calculated on the basis of the value declared to UN Comtrade).
Mali	• 2012, 2016-2018: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow). • 2013-2015, 2019-2022: National Statistics Institute (data sent to SWISSAID on 5 and 26 July 2023).
Maurice	• 2013-2015, 2017 : UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).

Namibia	• 2012-2021: Bank of Namibia (*Annual Report*, https://www.bon.com.na/Economic-information/Annual-Reports.aspx). • 2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Niger	• 2020-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Tanzania	• 2012-2017, 2019-2022: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow) (2013 and 2014: a hypothetical weight has been calculated on the basis of the value declared to UN Comtrade). • 2018: Ministry of Finance (data sent to SWISSAID on 27 January 2023).
Uganda	• 2014: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).
Zambia	• 2013-2022: Due to a lack of data, SWISSAID has used Zambia's total gold exports (Ministry of Finance (*Annual Economic Report*, https://www.mofnp.gov.zm/?page_id=3285). The Ministry of Mines and Mineral Development has confirmed to SWISSAID that Zambia's total gold exports refer to gold from the Kansanshi mine exported to Rand Refinery in South Africa (response received 20 October 2023).
Zimbabwe	• 2012-2020: UN Comtrade (HS 7108, https://comtradeplus.un.org/TradeFlow).

FIGURE 77 : Gold imports into South Africa as reported by countries of origin

- In addition to the African countries mentioned above, the following non-African countries exported gold to South Africa between 2012 and 2022 (UN Comtrade, HS 7108, https://comtradeplus.un.org/TradeFlow): Australia, Belgium, Brazil, Canada, France, Germany, China (Hong Kong SAR), India, Indonesia, Italy, Lebanon, Netherlands, Peru, Singapore, Spain, Switzerland, Thailand, Turkey, United Arab Emirates, United Kingdom and United States.

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