ANALYSIS REPORT

Supply chains of artisanal gold in West Africa

A study of the supply chain in two gold-producing regions of Burkina Faso and Senegal

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Authors
Yves Bertran Alvarez: Project coordinator in Burkina Faso
Baptiste Coué: Report coordinator and writer
Patrick Schein: Expert in artisanal gold supply chains

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Contents

Acronyms and abbreviations

AEA	Autorisation d'Exploitation Artisanale (Artisanal Operating Licences)
AFD	Agence Française de Développement (French Development Agency)
AGC	Artisanal Gold Council
ANEEMAS	Agence Nationale pour l'Encadrement de l'Exploitation Minière Artisanale et Semi-mécanisée (Burkina Faso) – (National Agency for the Supervision of Artisanal and Semi-mechanicanized Mining)
ARM	Alliance for Responsible Mining
ASM	Artisanal and Small-scale Mining
BNAF	Brigade Nationale Anti-Fraude de l'Or (National Anti-Fraud Brigade for Gold) Burkina Faso
BUMIGEB	Bureau des Mines et de la Géologie du Burkina (Office for Mining and Geology) Burkina Faso
CBMP	Comptoir Burkinabè des Métaux Précieux (National Trading Post for Precious Metals)
EIG	Economic Interest Group
FCFA	Franc de la Coopération Française d'Afrique (Franc of the African French Cooperation)
FGEF	French Global Environment Fund
LBMA	London Bullion Market Association
NGO	Non-governmental Organisation
OECD	Organisation for Economic Cooperation and Development
PADSEM	Projet d'Appui au Développement du Secteur Minier (Burkina Faso) – (Project Supporting the Development of the Mining Sector)
SEA	Sectoral Environmental Assessment
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization

1 General overview of the study

1.1 Study context

The study was carried out as part of the project for “creating an equitable gold sector and reducing mercury emissions in gold mining in West Africa,” led by the United Nations Industrial Development Organization (UNIDO) and implemented by the Alliance for Responsible Mining (ARM) and the Artisanal Gold Council (AGC) from 2013 to 2016.

Focusing on aspects relating to the creation of an equitable gold sector, ARM carried out a series of capacity-building activities at the organisation and administrative levels, as well as providing technical and environmental assistance for miners’ groups receiving support from the project in Burkina Faso and Senegal. These latter parties showed clear progress in the aforementioned areas and are moving towards a more responsible production process.

To achieve the creation of an equitable supply chain for gold, it is not enough to respect the Fairmined certification standards in terms of social and environmental conditions. The capacity to monitor production and commercialisation of the production from the mine through to the final consumer is one of the essential conditions to make this type of supply chain viable. Traceability is at the very heart of the supply chains of fairly-traded products and allows the creation of a direct link between the consumer and producer. As international trade develops, the traceability of gold is becoming the requested norm. Thus, the standards required by the London bullion market (LBMA) or the requirements of the Dodd-Franck law in the United States, or those of the European Union on conflict minerals, are progressively becoming the standard for the gold market.

In addition of providing support to mining organisations, the project included the study of certain aspects of public policy that could improve the formalisation of the Artisanal and Small-scale Mining sector (ASM). After consultation with the mining authorities in the countries in question, it was agreed that a study on the supply chain for gold would be useful for the administration as well as for the project, with a particular focus on the following questions:

- How is the commercialisation of artisanal gold organised today?
- What are the main routes and stakeholders?
- What are the most direct possible supply chains for the export of certified gold?
- What are the difficulties and barriers for an ASM mining organisation seeking to directly export its production?
- Is it possible to identify stakeholders in the existing supply chain ready to get involved in the commercialisation of certified gold?
- What are the possible levers for the administration seeking to reduce the current scope of the informal market?

1.2 Methodology

To carry out this study, we called on Mr Patrick Schein for his expertise as a specialist in supply chains, and as someone involved in ethical commercial routes in his role as a trader and refiner of precious metals. Mr Schein visited Burkina Faso and Senegal accompanied by Yves Bertran and Baptiste Coué, members of the project team, to carry out the interviews and observation work needed in order to understand the current supply chain and see what opportunities existed for the creation of an ethical sector.

The field work was conducted in 2016, between 29 May and 3 June in Burkina Faso and between 5 and 9 June in Senegal, before the arrival of the rainy season and the pause in artisanal mining activity in both countries. In both Burkina Faso and Senegal, meetings were organised in the capital as well as in the mining region of the pilot sites that are the most advanced in terms of organisation and the adoption of best practices (Figure 1).

Figure 1: map showing the position of the pilot sites studied in order to identify market channels.

In Senegal, interviews were held in Dakar, Kédougou, the capital of the mining region, and in Bantaco, a pilot site for the project. In Burkina Faso, the study team carried out interviews in Ouagadougou and travelled to Gombélédougou, the project pilot site, and Bobo-Dioulasso, the regional capital. The first interviews were conducted in the mining region of both countries, with the idea being to follow the sector through an ascending approach. The project team were able to facilitate the encounters as they had more than three years of experience in the field and knew the main stakeholders in the artisanal mining sub-sector and the institutions in charge of supervising it and providing support to it.

Below is a list of the main categories of stakeholders interviewed during the field visit in each country:

- Mining organisations and their representatives;
- Miners on artisanal sites;
- Buyers on site;
- Intermediaries in the mining region;
- Buyer-exporters;
- Jewellers;
- State laboratory;
- Mining institutions;
- Monetary and financial institutions;
- Forwarding agents;
- The Directorate General of Customs.

Detailed information about people interviewed can be found in the annex (§ 5). These meetings allowed the team to understand the realities and the challenges in the field as well as their regulatory and logistical framework.

This study, which is arranged in three main sections, firstly sets out the main features of the supply chain as it currently exists in Burkina Faso and Senegal, and seeks to analyse in detail the economic, social and fiscal levers that contribute to the current situation. In the second part, the study examines the regulatory context, with its incentives and binding mechanisms in order to understand to what extent this could explain the situation that

currently exists in the field. The third and final part focuses on the formulation of proposals for better understanding and managing the supply chain for artisanal gold in both countries

2 Main characteristics of the supply chains of artisanal gold

2.1 Characteristics shared by both countries

One observation that is immediately obvious when examining the supply chain for gold in West Africa is the entirely informal nature of the sector, which is further demonstrated by the total absence of tangible and official data, and therefore any references on which to base the definition of suitable public interventions. To understand how the sector works, one must go back to the source, to the sites and to the first seller, the miner or the mining group.

At the level of the mining sites, processing of the ore can be centralised at the level of the mining group, left to smaller working groups or can be distributed to each individual miner. Thus, at the Bantaco site in Senegal, artisanal miners share out the extracted ore once a certain quantity has been accumulated over a period of two weeks to one month, with each miner then processing his own share of the ore to extract the gold. During periods of high production, this sharing out may happen each week, with the miners working five days per week. If the mine pit has not yet reached its maximum output, the miners will receive each week the equivalent of what they have "spent", i.e. a few rocks or shovelfuls of ore that will allow them to meet their family's needs until the accumulated ore has been distributed. Consequently, the sale of the product as well as its processing are scattered throughout the multitude of miners. Each one generally sells to the highest bidder among the buyers in the mining village or a neighbouring village or town.

A first factor to take into account in the supply chain is that very often the first buyers are to be found very close to the miners, at the site itself or in the mining village. The miner therefore does not need to travel and bear the risk of transporting the gold he has obtained. This proximity with buyers means that it is easy to sell the gold immediately once it has been extracted.

The gold mining activity, despite the myths that surround it and the belief that it is a Holy Grail for all, is in fact a subsistence activity for the majority of people involved in it, from the miner to the first buyer. Certain categories of people, notably "site owners", "pit managers" and other "security chiefs" on site are in a better position than the miners, given the way the work is organised and the fruits of that work are distributed.

While these latter categories of people are characterised by a greater capacity to bide their time and accumulate, the former are subsistence miners and prefer to sell immediately, even when they have accumulated only small quantities. The existence of a system of local buyers is justified by the fact that most of the sellers at the beginning of the supply chain are selling small quantities and this does not make a journey to a larger town to sell for a better price worthwhile, notably because of the costs involved, the time spent and the risk this represents. In addition, by selling locally, the miner can go back to what he does best: extracting the ore and separating the gold. It is important to underline that a miner will earn more by returning to his extractive work than by traveling to sell his gold at a slightly higher price in town where he runs the risk of losing a day of production just to earn a few additional francs.

The ecosystem of the on-site buyer is the same as for industrialised companies, meaning that the economic actor concentrates on his own expertise and outsources at a reasonable cost all the so-called "non-strategic" activities; in doing so this creates an ecosystem gravitating around mineral extraction.

In Burkina Faso and in Senegal, the local traders generally buy gold from miners in weights starting from one-tenth of a gram, at a price that can vary between 83% - 94% of the gold price set by the reference market in London (London Bullion Market Association), commonly known as the London Gold Fixing Price, according to the quantities and the sites. Even if these transactions occur between a seller and a buyer of gold who have been trading together for many years, all along the chain the transactions will mostly be informal, in the sense that no written buy-sell agreement or any other traceable process exists, giving the sector a volatile and intangible appearance, as is often the case in the gold market. The weighing system can even use measures other than those of the international system (IS), as is the case in Burkina Faso where old coins are used[1].

In Senegal, artisanal mining produces between 2.3 and 6.7 tonnes of gold per year, with an average of 4.5 t/year[2]; and yet, according to the figures of the Customs Department, only one ton of gold is officially exported, not including the industrial production from the Sabodala Gold Operations. The production level estimated by Anthony Persaud can be compared with the results of the PASMI product studies (2007- 2010)[3], the results of which show that at least 8 500 – 9 000 people are working on mining operations at any one time, with a minimum production of 120 – 140 g per year, per person, giving a minimum production of 1.2 tonnes per year. If we consider that the activity has shown regular growth of 10% over the period, this gives a minimum production of 2.4 tonnes per year, which corroborates the estimates of Persaud. A global estimate, produced by Seccatore et al. (2014)[4] suggested an output of 0.3 t/year for a mining population of some 15,000 people.

These contradictory results are established from a model that takes as its baseline an annual production per miner of 20 g, which seems to be very low given the observations made in the field. However, if we modify the model with an annual per capital production of 140 g, we obtain an output of 2 tonnes for Senegal, which is around the same as the estimates based on local assessments. This estimated output can be compared with the current industrial output which stood at 6.4 tonnes for 2015[5].

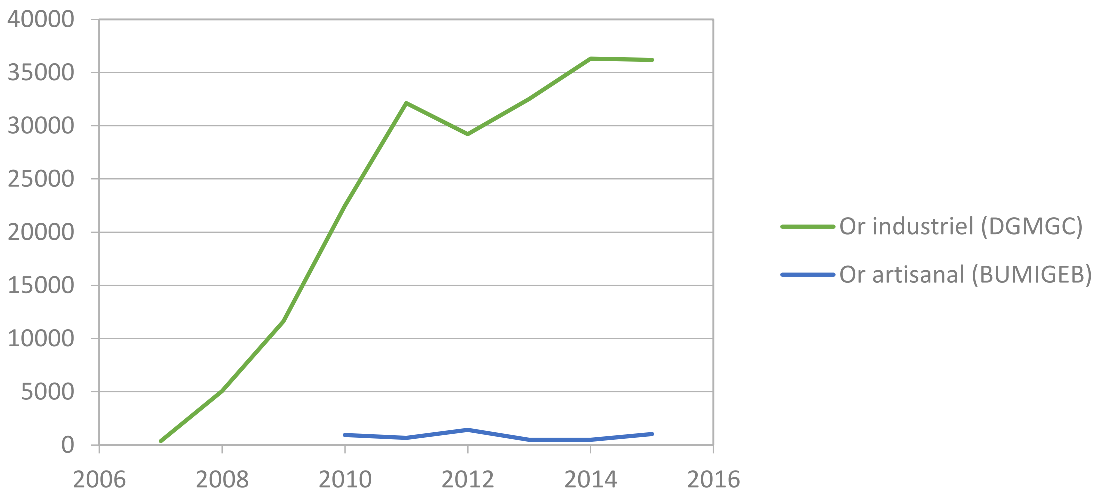

Figure 2: Export data from Burkina Faso based on official export statistics for industrial gold (DGMGC) and official gold assaying data for artisanal gold (BUMIGEB). The volumes are kilograms of gold.

[1] The "engros" is used everywhere, it is an old 25 FCFA coin that weighs 6 g.

[2] Persaud, A., 2008. Mercury use and the socio-economic significance of artisanal and small-scale gold (ASGM) mining in Senegal: a mixed-methods approach to understanding ASGM, Masters of Arts thesis, York University.

[3] Heemskerk, M. and Bertran-Alvarez, Y., 2008. Rapport de la campagne d'enquêtes 2007-2008 sur les sites d'orpaillage dans la région de Kédougou, Sénégal, Projet d'Appui au Secteur Minier (PASMI), Projekt-Consult GmbH.

[4] Seccatore, J., Veiga, M., Origliasso, C., Marin, T., and Tomi, G. D., 2014. An estimation of the artisanal small-scale production of gold in the world. Science of the Total Environment, 496, 662–667.

[5] UNIDO, 2016. Competitiveness development programme for small and medium-sized enterprises (SMEs) and the private sector in the Kédougou region, Report.

In Burkina Faso, the recent gold production estimates were calculated as part of the estimates of mercury emissions[6], and during a sectoral environmental assessments (SEA) performed as part of the PADSEM[7] support project. The figures obtained by UNEP are of more than 32 t/year although certain parameters have not been justified, while the discussion carried out as part of the SEA highlights a coherence in the previous estimates and the current production of around 20 t/year of artisanal gold. The recent report from the Parliamentary Committee of Inquiry on the mining sector[8] mentioned an undeclared production of artisanal gold of between 15 and 30 tonnes/year, with a median value of 22.5 tonnes per year, which is in line with the estimates made elsewhere. However, in 2015 the National Anti-Fraud Brigade for Gold (BNAF) recorded no official exports of artisanal gold.

Meanwhile, the office for mining and geology in Burkina Faso (BUMIGEB, Bureau des Mines et de la Géologie du Burkina) only assayed around one ton of gold. The current declarations of exported artisanal gold are coherent with the erosion in exports seen since the 1990s, as shown by the output recorded by the national trading buying house for precious metals (CBMP, Comptoir Burkinabè des Métaux Précieux), Figure 3, which was the only official buyer for the product until 1995 when the sector was liberalised. Taking into account that the artisanal production of gold is far from negligible compared to industrial production, these figures highlight the presence of a very significant level of illegal exporting in both countries, which is, in fact, the main supply chain. In the next two sections, we will therefore describe the route taken by this invisible gold, in both Burkina Faso and Senegal.

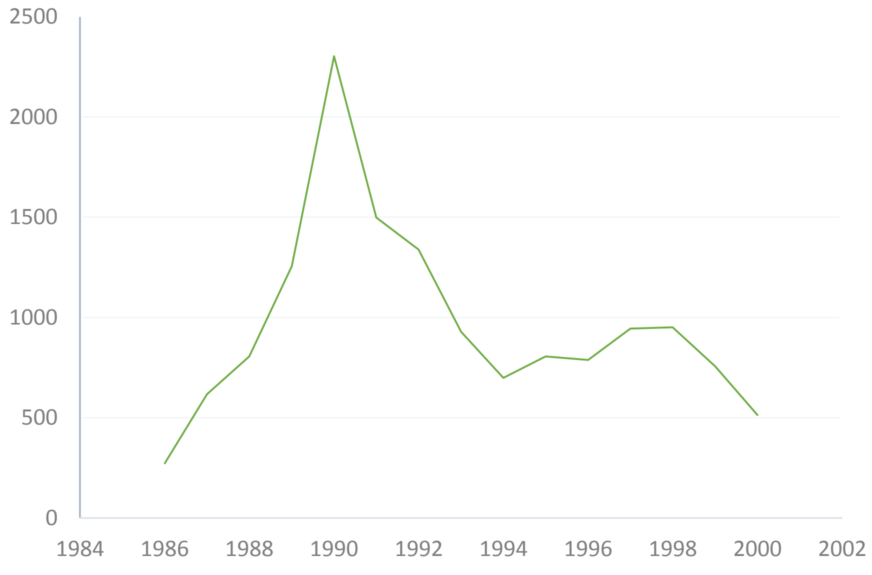

Figure 3: data on gold production in Burkina Faso, in kg, recorded by CBMP between 1986 and 2000.

[6] AMAP/UNEP, 2013. Technical Background Report for the Global Mercury Assessment 2013. Arctic Monitoring and Assess- ment Programme, Oslo, Norway/UNEP Chemicals Branch, Geneva, Switzerland, 263 pp.

[7] PADSEM, 2014. Évaluation Environnementale et Sociale du Secteur Minier. État des lieux, Land Resources.

[8] Assemblée Nationale, 2016. Rapport Général de la Commission d'Enquête Parlementaire sur la gestion des titres miniers et la responsabilité sociale des entreprises minières, septembre 2016.

2.2 Specific features of the supply chain in Burkina Faso

Figure 4: current stock of a local buyer based in Gombélédougou, active at this site and neighbouring sites. Around 180g of raw gold.

In the mining region of South-West Burkina Faso, where the Gombélédou site is located, the supply chain continues with the sale of the gold to a second intermediary, the regional trader. The local trader, who buys gold from the miners by decigrams, can accumulate between 50 and 100 grams of gold (Figure 4) before selling this wholesale to the regional trader. Often the local dealer will melt the gold, losing around 5 – 8% as impurities, in order to create batches of many tens of grams, which will earn a higher price when sold on. Local buyers are often undeclared when they work in isolation and are generally self-financed. The gold content is evaluated visually in the field then measured at home using densitometry, applying a pre-determined formula. Quite often, local traders are sent to the mining sites by the regional trader, who is thus sure to capture all of the available collected gold, in exchange for a percentage commission on the collected quantities; in some case he also provides an advance of the working capital needed to collect the gold.

As a result, the buyer is often declared under the cover of the regional trader[9]. So, if the local buyer purchases the gold at a maximum retail price for the gold content of 93% - 94%[10] of the world price from the miners, the regional trader will buy it wholesale at a price equivalent to 97% - 98% of the LBMA price.

Once the trader from the south-west region has accumulated a certain quantity of gold, generally many hundreds of grams, he will travel to the capital, Ouagadougou, to trade it at around 99.2% - 99.5% of the LBMA price (see the global diagram in Figure 5). The buyer in Ouagadougou will then export this gold abroad, once he has acquired a number of kilograms. He has two possible ways of doing this:

- Legally exporting the gold, meaning the merchandise will be subject to an export tax of 1.75% of the LMBA value of the product as well as the assaying costs of the State laboratory, some 0.2%. In total, the export cost is nearly 2% of the value of the merchandise, based on the LBMA price at the time of the study, which was the end of May 2016. Given that this gold was purchased at a high price (above 99%), to make a profit the national trader must export the gold at a higher price than the world price, which is very unlikely.
- Selling the gold clandestinely in a neighbouring country where the purchase price is below the world price, at 97-98% of the LBMA price according to our estimates, but in the form of a transaction where the seller will not have to pay the official tax. If we just take into consideration the purchase price (99.2-99.5% of the LBMA value)

[9] Interview with S. H., local buyer, on 31/05/16.
[10] The percentages are calculated on the basis of the LBMA gold price in effect during the field visit and applies to gold content.

and the sale price (97-98% of the LBMA value), we must conclude that the trader is selling at a loss even without taking into account the cost of the contraband. To understand the economic logic here, we have to look at gold in its role as a currency.

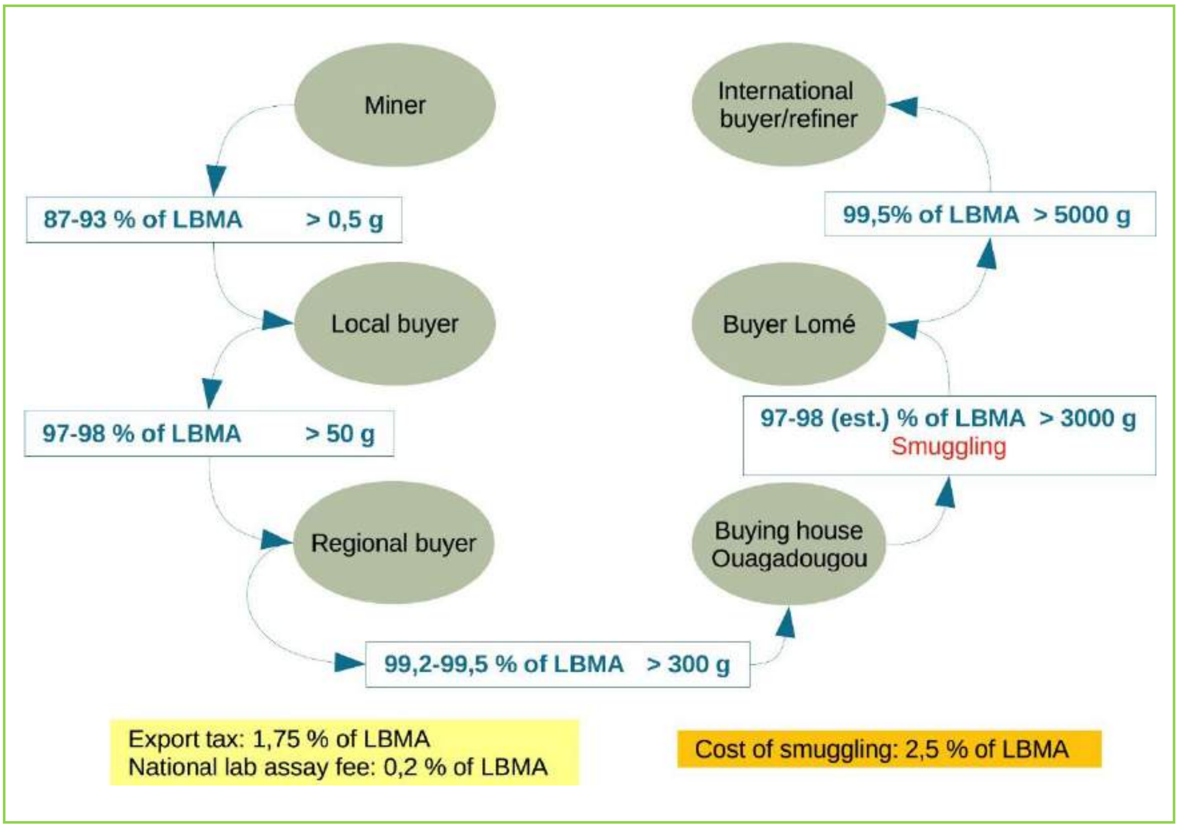

Figure 5: structure of the artisanal gold sector in Burkina Faso.

Figure 6: Belt for hiding contraband gold, up to 6kg of gold can be hidden here, worth around 200 000 euros.

Gold is an internationally known and recognised means of trade, particularly for West African merchants, and can be used to reduce or avoid the customs taxes levied on the import of goods. Since the times of the High Middle Ages, gold has been a means of trade with North Africa and the Middle East. According to the OECD[11], gold is also used as a trading currency in other West African countries such as Ghana and Liberia, allowing economic agents to avoid the official banking and currency exchange circuits. Thus, a merchant who wishes to purchase large quantities of goods in another country can use gold as a means of payment. As it is transported as contraband, the precious metal escapes all taxes. By selling it in a neighbouring country, the merchant manages to localise currency abroad, which he can then use to acquire and import goods, declaring them at a lower price, or bringing them in as contraband (Figure 6).

So, although the merchant loses up to 2.5% of the LBMA price by selling his gold in a neighbouring country, he gains from a tax perspective. That is the main reason why gold from Gombélédougou, and gold from Burkina Faso more generally, once it has transited by Ouagadougou, ends up crossing the border and being sold on the Togolese market and, to a lesser extent, in Nigeria and Ghana. Gold plays a primary role as a non-traceable currency as it is a metal that can be melted down and easily measured by densimeter. A simple blowtorch and a weighing scale in centigrams are sufficient. The route taken by gold to Togo is confirmed by export statistics, by recent work carried out by OECD[12], notably because this country's market place offers higher prices than Liberia, as well as by the recent report from the NGO Public Eye (formerly Berne Declaration)[13]. The diagram in Figure 7 summarizes the various commercial routes for gold produced in Burkina Faso. According to the comments from the recently appointed Director of ANEEMAS, the new agency in charge of supervising the artisanal and semi-mechanical mining sector, the recently lowering of taxes in Côte d'Ivoire could also attract a substantial proportion of the gold from Burkina Faso.

[11] Louis Maréchal, personal communication.
[12] *Ibid.*
[13] « Un filon en or » - La déclaration de Berne – Septembre 2015 - www.ladb.ch/matierespremieres

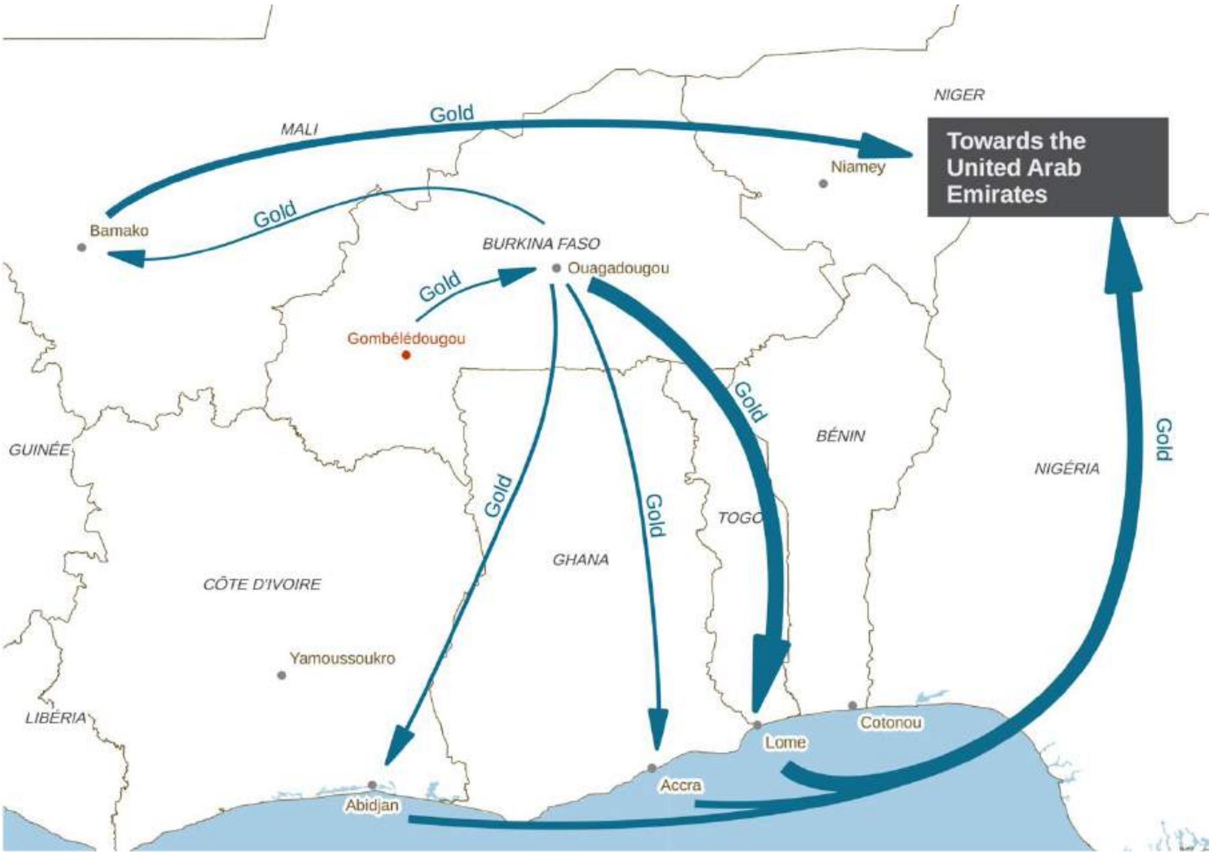

Figure 7: sketch map showing the flow of artisanal gold from Burkina Faso in the supply chains. The thickness of the arrows indicates the estimated relative proportion of the sectors.

2.3 Specific features of the supply chain in Senegal

In Senegal, as with Burkina Faso, the initial buyer, who lives in the mining village, is often the local representative of a larger trader, who finances and mandates buyers, sometimes over a number of mining sites in the region. The extreme eastern location of the mining region of Kédougou, its physical and logistical distance from the capital, Dakar (12 hours by road and no regular air link) and its position on the borders of two countries are a number of factors that favour the passage of gold as contraband to Mali and, to a far lesser extent, to Guinea. In addition to these logistics factors it should be noted that Malian buyers, mostly Bambaras, are of the same ethnic group as the Malinke who manage and run the artisanal operation in Senegal. This proximity can even be seen in family ties, with many clans having close relations on the other side of the Falémé River, which acts as the border between the two countries.

While the majority of local buyers thus work for Malian traders, it should not be forgotten that a network of Senegalese intermediaries exists, supplying traders in Dakar (see the structure of the sector in Figure 8). However, the many barriers facing these buyers wanting to sell their gold in Dakar hinders the development of a more substantial sector. It is often riskier for a trader to transport his gold to Dakar by road than to pass it as contraband to Mali along mud tracks and where more important relays will take responsibility for transporting the merchandise from Kéniéba (a Malian town on the Senegalese border) to Bamako where it will then be exported.

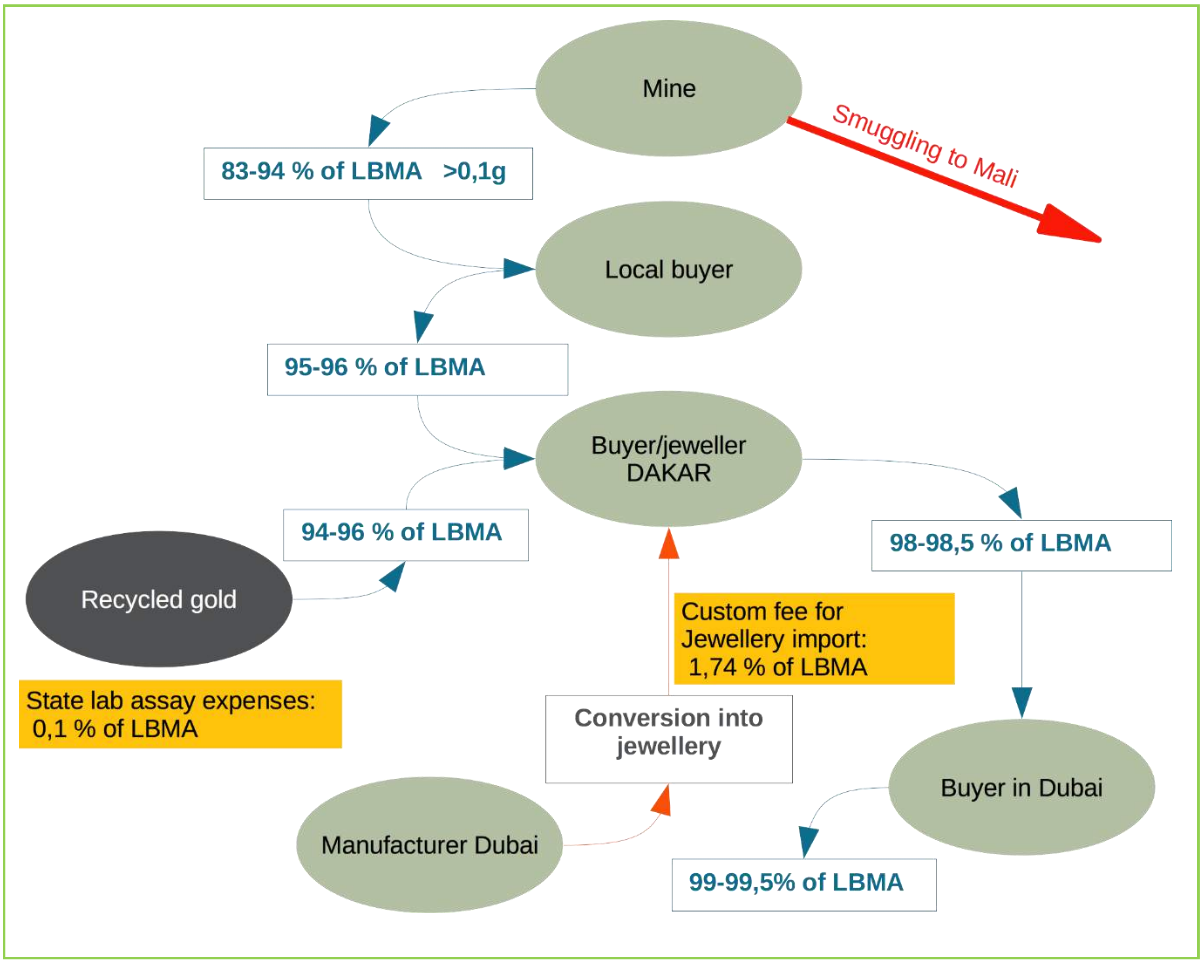

Figure 8: Diagram showing the flow of artisanal gold in Senegal

A number of Senegalese traders talked about the constant "hassle" along the journey between Kédougou and Dakar. The customs authorities require gold traders to provide an assay of the gold accompanied by a document stating that the trader has the right to transport the gold, and even an invoice showing the assayed gold purity. However, to date the vast majority of transactions are informal, notably because entering the formal process would require artisanal mining groups to pay a production tax on all the gold they declared. Therefore, traders wishing to remove the gold from mining sites to take it to Dakar, even if they are in possession of a document confirming that they are officially buyers, sometimes have their merchandise confiscated because they are unable to produce any document confirming the traceability (name of seller, quantity, etc.) of the product they are transporting. The mining tax, although low (production tax is 3% of the value of the first purchase) is a strong vector for informal trading, particularly in regions where the State has little presence.

The purchase and resale price change along the supply chain. According to the mine's location and the miner's negotiating power, the purchase price offered by the local trader can vary from 83% - 94% of the LBMA price for quantities that are generally comprised between one-tenth of a gram and a few grams.

If the local buyer represents a Malian trader, he will seek to export his gold as contraband over the border. If he usually works with the Senegalese sector, the local trader will transport his gold to the Dakar region.

This transfer to Dakar will not necessarily be direct from the mining site. There are a number of buy/sell models in existence from the region of Kédougou to the capital, Dakar. Of course, the simplest model is where a local buyer based at a mining site acquires a few dozen grams and regularly visits Dakar, every two weeks or once a month, to sell his gold to a trader in the capital. However, it is also common to see systems where a regional buyer based in the town of Kédougou – a jeweller for example – is linked to a series of collectors at a number of mining sites and accumulates a few hundred grams before selling the gold to a wholesale buyer or directly at Kédougou – to buyers from the capital who come once a month or once a quarter to Kédougou – or in the Dakar region. The intermediary between the first buyer at the mine level and the national trader in Dakar could purchase the gold at retail for around 95%-96% of the LBMA price and then sell it wholesale at between 98% - 98.5% of the LBMA price to the trader in Dakar.

Figure 9: jeweller's sign in the Medina district of Dakar.

2.4 Jewellery making

It is important to discuss a specific feature of the gold market of Senegal: this country has a strong tradition of jewellery making. The jewellery profession is a form of heritage in Senegal as it is one of the caste professions, along with many manual professions such as tailors or shoemakers. Thus, for generations, many great families named Lam, Niang, Thiam (Figure 9) or Niass have dominated the jewellery sector in Senegal with some historically important sites such as the Tilène market in Dakar (Figure 10) and the Pikine workshops.

Figure 10: jewellers at the Tilène wholesale market in Dakar.

Most of these jewellers traditionally used gold from Mali or Guinea or even from further afield. Recycling, which means the purchase or exchange by the jeweller of jewellery from his customers was another major source of supply given that, even today, gold jewellery is as much a traditional adornment, particularly for Senegalese women, as a means of guaranteeing savings.

This changed in around 2010, with the development of Senegalese production and the rise in the market price of gold. Traditional Senegalese jewellery is typically made from relatively heavy solid gold, in comparison with industrially-produced jewellery (Figure 11). This means that for the same design, an artisanal piece of jewellery would have to contain more gold, which would make it more expensive than an industrially-produced item. According to Senegalese jewellers, with the increase in the price of gold, Senegalese women started to turn away from the solid gold jewellery, typical of Senegalese jewellery making, in favour of more industrial or hollow jewellery that was lighter and therefore less expensive[14].

Senegalese jewellery was unable to adapt to this change and jewellery from Dubai and Italy rapidly gained prominence on the market. Although certain jewellers continue with the artisanal production of traditional gold jewellery for a niche market, the majority of jewellers are now traders, as demonstrated at the Tilène market where today almost all of the jewellery on offer comes from Dubai, according to the sellers at the market. Thus, in most cases, the artisan jeweller has become an importer of jewellery, either directly on behalf of major jewellers, or indirectly for others, notably through the Tilène market. The role of the jeweller is thus limited to recycling the gold from jewellery at a price of 94-96% of the LBMA, price, which is then temporarily exported to Dubai in the form of waste and exchanged against 18- or 21-carat jewellery.

[14] Interview with Abdoulaye Lam, Jeweller, 08/06/16.

Figure 11: traditional jewellery in fine gold (24 ct).

With the boom in artisanal gold production in Senegal in the last decade, jewellers started to obtain their supply from the national artisanal gold miners. Although this trend would have suggested the emergence of a 100% national supply chain and jewellery production process, it appears that most of the jewellers who buy Senegalese gold combine it with recycled jewellery to be melted down and exported to Dubai. That is how some of the Senegalese jewellers, who until now had been artisan jewellery makers and thus the end consumers of the raw or semi-processed gold from the sub-region, have in fact become intermediaries in the supply chain of artisanal gold from Senegal. It should be noted that traders who export artisanal gold can easily melt it with recycled gold and declare the blend as being entirely recycled, which allows them to avoid the taxes applicable to mined gold. The increase in the volume of gold exported via the Senegalese artisanal sector could result in growth in the business of importing industrial jewellery. In 2015, around 700kg of fine gold was exported for "further improvement" under the cover of recycled gold, mostly to Dubai. As with the studies of the PASMI project in 2008, our studies show that around 80% of the artisanal gold produced in Senegal enters the supply chain in Mali. While the proportional of artisanal gold from the region of Kédougou injected into this sector is still currently low, it could grow in years to come, given the trading hubs created by the Senegalese jewellery sector at Kédougou, the capital of the region of production. According to our analysis, this Senegalese competition with the Malian sector does not necessarily means that there has been a revival of traditional West African jewellery making, the standards of which do not necessarily correspond to current trends. The symbol of the jewellery as an item of value seems to be part of a niche tending towards the luxury jewellery sector, and there are few traditional Senegalese jewellers still producing items in solid or 24 carat gold.

Instead, the jewellery sector is looking to optimise yields from the export-import sector, particularly as the customs duty on jewellery reimported in the name of inward processing are 300 FCFA/g (0.46 €/g) for a value of 26.5€/g for the jewellery, representing a 1.74% import tax, which is extremely advantageous. Current legislation and the infiltration of artisanal gold into the sector seem to be the drivers behind the current trend in the distribution sector in Dakar. The flows of artisanal gold are illustrated in Figure 12.

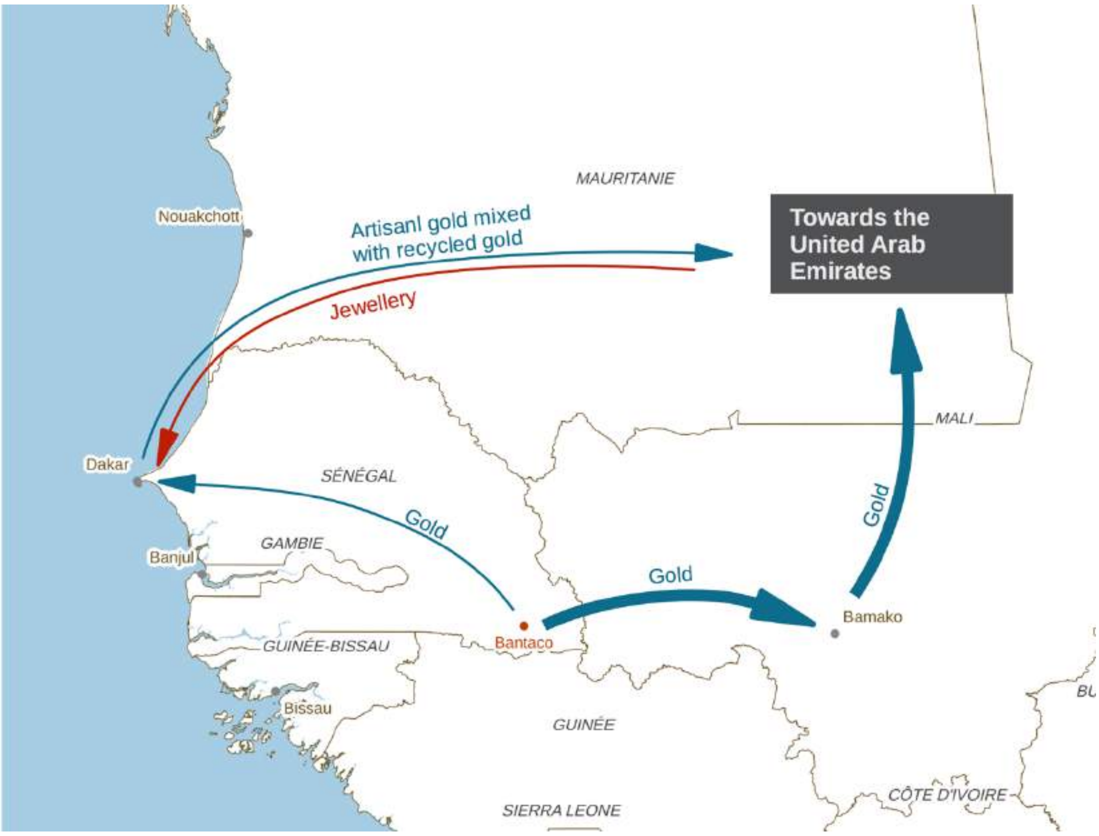

Figure 12: sketch map showing the flows of artisanal gold from the region of Kédougou into the supply chains. The thickness of the arrows indicates the estimated relative proportion of the sectors.

3 Regulatory context applying to the commercialisation and export of gold

In light of the analysis above, in order to understand the major levers of the supply chain for artisanal gold in both countries, it is important to focus on the regulatory factors that govern the commercialisation and export of gold, in so far as these can constitute an impediment or an incentive for usual practices and the move towards formalising the sector.

3.1 In Burkina Faso

Although the majority of artisanal gold does not enter the formal sector in Burkina Faso, there is nevertheless a legal framework that artisanal miners should follow in order to commercialise their gold. Thus, the country has no fewer than 67 trading buying house registered as being compliant with current regulations15[15]. However, according to the BNAF[16], based on the quarterly declarations of these buying house (which are required under article 6 of Decree 2006-629), only 10 of them declare purchase and sale volumes of gold, proof that the formalisation of the sector is struggling to make headway.

Artisanal miners, whether individuals or holders of artisanal operating licences, are required, pursuant to article 4 of the same decree (note 15) to sell their products to approved trading buying house. These ones, in addition to being required to maintain a purchase-sale ledger (art. 6), should transform the gold into pieces, ingots or bars and have them officially assayed by the BUMIGEB (art. 7). In other words, they cannot be simple intermediaries who sell on the gold in a similar state to how they acquired it.

Inter-ministerial Decree 090001[17] sets out further requirements for the trading buying house, notably regarding the procedure for opening one. The trading buying house's licence is delivered by inter-ministerial decree[18] for a renewable period of three years (art. 5) and at a cost of three million Francs CFA (art. 7). The licence holder must keep a register of all representative and agents in charge of purchasing (art. 10) and must perform all transactions in Francs CFA (art. 8).

The artisan miner must, in turn, pay a fee of 5% on the gold produced, after a reduction of 100 FCFA/gr, according to article 12 of Decree 2010-75. While the commercialisation process within the country for the trading buying house is relatively well structured, to the extent that they can be required to relinquish part of their production if national jewellers require it (art. 11 of the inter-ministerial decree), the export process is more restrictive. The trading buying house has to, firstly, have the gold assayed by the BUGIMEB (art. 8 of Decree 2006-629). This procedure costs 25 FCFA/g (0.038 €/g) plus 2 000 FCFA (3 €) per ingot, to which

[15] See article 10 of Decree 2006-629 setting out regulations for the commercialisation of artisanal gold produced in Burkina Faso

[16] Brigade Nationale Anti-Fraude de l'Or

[17] See inter-ministerial Decree n°090001/MCE/MEF/MCPEA of 03 February 2009, setting out the conditions for the licencing and the specifications for the purchase, sale and export of gold from Burkina Faso.

[18] For an example of a first authorisation see:
http://www.legiburkina.bf/m/Som
Or for a renewal:
http://www.le-giburkina.bf/m/Sommaires_JO/rreteconjoint_2013_MME_MEF_MICA_00004.htm (consulted on 16 October 2016)

should be added a 1.75% tax, some 400,000 FCFA/kg (610 €/kg).

In addition, the exporter must obtain an export document from the Chamber of Commerce and Industry, which is signed by the customs authority and the exporter's bank, which must be licensed in Burkina (art. 13 of Decree 090001). This document allows the Burkina Faso authorities to obtain information relating to the recipient of the merchandise, their nature, and the financial payment of the export (bank domiciliation). As the trading buying house is required to repatriate the funds from the domiciled bank with one month of payment being due (art. 13) and to provide the necessary supporting documents within 45 days (art. 15), this document represents a means of requiring the repatriation of currency resulting from the commercial operation.

When the exporter carries out an international transaction, this is considered to be an export proceeds repatriation commitment (art. 12) through which he undertakes to repatriate all the income from the export operation. Exporting is therefore an operation with a substantial cost – compared to the cost of the informal process – and an operation that is more complex in terms of procedures and particularly burdensome because of the requirement to repatriate the funds. The combination of these three aspects are important limiting factors to the formalisation of the export process. The regulatory system is structured in such a way that it is much easier and cheaper to move the gold as contraband into a neighbouring country than to export it in accordance with the rules.

The elements driving the informal export of gold are therefore not all directly related to the gold mining sector per se. As explained above, contraband gold represents a currency in Burkina Faso that makes it possible to avoid the compulsory repatriation of currency from an export transaction, and thus to place currency abroad while avoiding the export taxes. In this way, it is easier to acquire goods abroad, which are surely imported at a lower face value, or as contraband, to be sold in Burkina Faso, while minimising or avoiding customs duty on imports. Artisanal gold is used to get around currency control legislation, in order to have currency available abroad without having to declare it. It is a veritable currency that allows users to avoid the banking system.

Although article 12 of Decree 2006-629 put in place an anti-fraud structure for the commercialisation of gold, known as the National Anti-Fraud Brigade for gold (BNAF), the commercialisation of gold is so widely disseminated throughout mining communities that supervising it is difficult. This structure, which is directly attached to the cabinet of the Minister of Mines, does not have its own budget and operates with a team of just 11 people. A tool created to limit the excesses of stakeholders in the sector, the BNAF has to apply legal procedures that can last for years, undermining their effectiveness. Only the creation of an attractive tax and custom's duty policy would seem able to overcome this dynamic, making formalisation less restrictive and financially beneficial. This also involves relaxing the regulations around currency exchanges, because today the gold is used to get around these regulations. It is used as a fungible currency around the world and is untraceable because easily convertible.

Since the field mission, the Government of Burkina Faso and the parliament have updated their legislation on commercialisation of the artisanal gold, as detailed below. We analyse later the consequences of these new provisions.

Law 028-2017 of 16 May 2017 and Decree 2017-0023 of 23 January 2017

Since the publication of the first version of this report, the Law 028-2017 setting out the organisation of the trade in gold and other precious substances in Burkina Faso was approved by Parliament on 16 May 2017. The most important changes provided by this law include:

- Issuing of an artisanal miner card (article 13),
- Creation of a one-stop shop (article 14) in charge of:
  - procedures relating to artisanal and semi-mechanised mining activities and their waste processing;
  - the purchase and export of gold and other precious substances;
  - collection of mining fees, taxes and royalties related to artisanal and semi-mechanised mining activities and their waste processing;
  - the purchase and export of gold and other precious substances on behalf of the public treasury;
  - issuing the artisan miner card.
- The payment of mining taxes and royalties for artisanal production is now the responsibility of the licence holders (counters) (article 24),
- Artisanal gold miners are required to sell all of their production to holders of the artisanal operating licence or the national structure in charge of the management of artisanal and semi-mechanised mining operations (article 26),
- The holders of the artisanal operating licence are required to sell all of their production to a trading buying house or the national structure in charge of the management of artisanal and semi-mechanised mining operations (article 26),
- The fact that any artisanal operating sites not covered by a permit automatically come under the control of the national structure in charge of the management of artisanal and semi-mechanised mining operations (article 26).

The many procedures for applying this law will be detailed in a forthcoming regulation. In addition, the law addresses fraud in the trade in gold and other precious substances, the sanctions, the structure and the supervisory procedures.

In parallel, with Decree 2017-0023 published on 23 January 2017, the royalty on gold is no long payable by the miner but by the trading and export buying house (article 14). The rate is now set at 3-5% depending on the market price for gold, and is reduced to 200 000 FCFA per kilogramme, or less than 1% of the value of the gold (0.9% on the basis of the market price for gold during the field study period) if the gold is sold to the designated government body (article 14).

These new measures are a positive step, with the royalty being levied at the counter level, and it being reduced to a low level if the designated government body purchases the gold; nevertheless, the sale will have to be concluded in a short timeframe. However, the failure to generalize the same level of royalty to counters and the maintenance of the requirement to repatriate currency means that there is a risk of artisanal gold continuing to be exported informally, as it will continue to be a means of locating currency outside of Burkina Faso. Only the generalisation of a low royalty combined with the end of the requirement to repatriate currency will create a formal flow of artisanal gold exports, given the current fiscal set up of the country, where taxation is based on the collection of customs duties at import.

The other important measure introduced by the law is the requirement for artisanal gold miners who do not work in formal mining sites to sell their production to the national structure in charge of the management of artisanal and semi-mechanised mining operations. Among other things, this implies the need for the structure to be present in production areas to receive the gold directly from the artisanal gold miners. However, it also creates a conflict of interest with the mining authorities, as the informal nature of the artisanal gold miners automatically eliminates any competition with the formal sector, whereas the licence for a counter is issued by an inter-ministerial decree, where one of the signatories is the Minister of Mines (article 20 of the Law of 16 May 2017).

Lastly, the fact that the government purchases artisanal gold, whether to hold it or to sell it onto the formal sector, means it will be required to respect all the due diligences in force at an international level, notably the traceability of gold before purchase.

3.2 In Senegal

In Senegal, holders of artisanal and small-scale mining licences are required to sell their gold to trading buying houses if the quantities exceed ten grams, under the measures set out in Decree 09931 of 2014 relating to the operation of said buying houses. In June 2016, Senegal had delivered five authorisations for trading buying houses, mostly in the Kédougou region. However, most of them were not officially operational due to the fact that informality was still more attractive financially than formal trading, notably for the miner, making it difficult to implement legal commercial circuits.

Under the provisions of the 2003 Mining Code (art. 57), a miner who decided to follow the legal circuit and declare all the production he was selling would have to pay a tax of 3% of the ore-mine value. The draft version of the new mining code, which was submitted to public consultation in 2015, provides for an increase in this tax to 5% for gold. In the latest version that we were able to procure, article 77 on mining fees sets out a difference between the tax applicable to raw gold (5%), gold refined abroad (5%), and gold refined in Senegal (3.5%). Although this differentiation could encourage national processing, the level at which the taxes are due to be set remain quite high and are dissuasive for the formalisation of the mining sector.

It is important to bear in mind the reality in the field and consider that artisanal mining remains a subsistence activity for the majority of miners. Setting a tax at 3% or 5% will have a direct impact on the purchasing power of the household. To this should be added that the local buyer – Malian or Senegalese – is generally to be found on site, whereas the trading buying house is located at Kédougou, or in the capital of the neighbouring department of Saraya, which implies a non-negligible cost of transport for the miner, should he wish to respect the legal process. Reducing this tax – while maintaining a slight difference in order to encourage local processing – could remove an important barrier to the entrance of artisan miners to the formal supply chain. Lastly, this measure is inapplicable as it stands because the tax is payable by the producer who does not know whether his gold will be refined locally or not.

The fact that there are few trading buying houses in operation can be explained in part by the significant administrative requirements for opening one, which can take a number of months, and also because the initial capital requirement is 20 million FCFA (30 500 €). This reduces the chances of the number of trading buying houses multiplying and therefore means there is less tendency for the legal demand to grow. In light of the difficulties for trading buying houses to compete with the prices applied in the informal market, the introduction of financial barriers to entrance into the official gold trading market can be a prohibitive obstacle for potential buyers. To this should be added the fact that the trading hub is required to maintain transaction registers and must communicate this data, with supporting sale and purchase documentation, to the Ministry of Finances each quarter. However, the various ministers interviewed confirmed that no real monitoring of the trading buying houses exists at this moment.

As regards exportation, trading buying houses and other traders must obtain an export licence, valid for one year. It is important to emphasise that the trading buying houses are not the only bodies licenced to commercialise and export gold; any legal or natural person registered as such with the Chamber of Commerce can freely trade and export gold. To obtain the licence, the application must be submitted to the Direction de la Monnaie et du Crédit, attached to the Ministry of Finances, and the application generally results in the delivery of the licence, provided the required documentation is submitted. In 2015, no fewer than 114 gold export licences were awarded.

To then proceed with formal exportation, the trader must have the gold assayed in the laboratory of the Ministry of Mines, at a cost of 20 000 FCFA/kg (30 €/kg). If the value exceeds five million FCFA (7 622 €), the exporter must produce a currency exchange engagement and an export certificate, that oblige him to repatriate the export proceeds. The model is such that definitive exports are therefore impossible, which facilitates the use of gold as a currency of exchange for the acquisition of goods abroad, particularly jewellery for the Senegalese market. The gold is sent abroad under the inward processing regime - mainly to Dubai - with payment of a lump sum tax of 300 FCFA/g, then reimported as jewellery, thus avoiding the problem of the exchange rate controls. In Senegal, even more so than in Burkina Faso, gold is used not only as a currency but also as a form of merchandise which, as a result of its local origins and its preferential customs duty, can be used to reintroduce jewellery with a customs duty that is almost zero. This phenomenon has contributed to the accelerated loss of a local artisanal jewellery sector.

4 Proposals for formalising the supply chain of artisanal gold

Following the description of the supply chain in the field and the study of the regulations governing the trade and export of gold, it appears obvious that the informal nature of the supply chain cannot only be explained by the behaviour of the gold miner who has decided to avoid the taxes imposed upon him.

In reality, it is the entire official sales circuit, as it stands today, from the taxes levied on artisanal mining activity to the need to repatriate funds after exportation, via the restrictive conditions for opening trading buying houses and the various costs and administrative burdens throughout the chain right though to export, that lead to informal trading remaining in place in this sector.

In this last part, we will therefore formulate some recommendations on the way in which the formal supply chain could be made more attractive for the various stakeholders in the sector in each country.

In Burkina Faso, the fee payable on artisanal mining production is set from3 to 5% after a reduction of 100 FCFA/g[19]. In Senegal, the fee which was in place to date was 3%; the new mining code under discussion would appear to want to raise this fee to 5%. Given that artisanal mining activity continues to be a subsistence activity, even a survival activity, for most West African miners, and that it contributes substantially to the region's economy, even if not to the country[20], lowering this tax to between 0.5 and 1% could be of interest, insofar as this would help to reduce the gap between the price of informal commercialisation, where no tax is levied on the value of the goods - and the cost of formal commercialisation.

As a financial incentive, mining organisations that formalize through the acquisition of mining titles, keeping transparent registers and selling via trading buyer houses, could be exonerated from fees for the first two or three years of their formal activity. This policy would allow mining organisations to fully invest in the development of their activity in the start-up phases, in the same way as the exonerations are awarded in the industrial sector. With technical and administrative support provided by the authority in charge of the sector, a more efficient system would emerge generating greater income. Taking this idea further, this exoneration could be awarded on condition that the mining organisations – rather than being taxed directly – invest an amount corresponding to the fee into the responsible development of their activity: protective equipment, environmental rehabilitation, policies to encourage the inclusion of women, investments in clean technologies (without chemical products), etc. This type of encouragement could also be conditioned by the requirement to purchase from national and/or regional producers, thus encouraging the local integration of operators linked to the artisanal mining sector, which is growing fast.

To understand this position in favour of artisanal mining, the essence of the public policy

[19] Update of the 22nd of November 2017: the recent measures taken in Burkina Faso regarding the creation of a structure in charge of purchasing the artisanal gold with a lowered fee are necessary but not sufficient, as long as remains the obligation to repatriate the funds that will make artisanal gold be used as a monetary vehicle that allows to get round of the change regimes

[20] 4,5 tonnes of artisanal gold, according the current estimates, would represent around 90 billion FCFA (137 million euros), among which the most part is integrated in the local economy. This corresponds to a contribution of 1% to the GDP.

should be kept in mind, the aim of which is to create a public good and to promote the sustainable and equitable development of the population.

Artisanal mining, because of its low level of mechanisation compared to industrial mining, is a large employer and an economic sector of consequence[21] for the private sector. From a macro-economic point of view, the advantage of artisanal mining does not lie in the financial revenue it could generate for the State – in contrast to large scale mining – but lies in the fact that it is a vector of economic and social development, both in individual and in community terms, for a large part of the population living in mining regions, particularly in Burkina Faso.

The interest for the State here is not necessarily in the collection of taxes, which will be intrinsically difficult to gather as a result of the scattered nature of mining activity within the rural community of each country. The cost of enforcing such a policy would certainly be higher than any sums collected through it. In terms of the mining fee, the 200 artisanal operating licences (AEA, *autorisations d'exploitation artisanale*) bring in around 40 million FCFA for Burkina Faso, while in Senegal the few licences that have been awarded earn around the same amount. Current declarations of production (tax *ad valorem*) are almost non-existent for both countries. We noted, particularly in Senegal, that the informal nature of artisanal gold production blocked the development of the downstream supply chain. In order to encourage movement towards an official sector, the State must therefore not only pay attention to the creation of effective strategies and incentives so that miners produce legally, but also enhance the attractiveness of the official supply chain downstream of production. For the artisanal miner, the decision to sell to a trading hub must not only be a requirement but should stem from a rational choice in terms of cost and benefits as a result of the proactive policy of the state. The macro-economic benefits of such a policy will be felt at the level of the economic growth of the region of production. As a miner from Gombélédougou said: "I sell to whoever offers the highest price, according to the quantities I have available."[22]

Rather than focusing taxation on production, which is difficult to implement because of the need for precise monitoring by the administrative authorities, the taxation should be reviewed and simplified, with one single point of payment. The most obvious and easiest to implement would be at the time of export. Such a tax would be added to the purchase price all along the sector, from the exporter to the producer, but would have the advantage of facilitating the entrance of artisanal producers acting in full legality, and at the same time would create a legal buying channel from the origin of the production. In the particular case of Senegal, such a measure would facilitate transport and improve the Senegalese sector, which is important for the jewellery industry. The question of whether the gold is legal would no longer arise for the exporter (other than the payment of mining fees by producers) as a single tax would be included in the purchase price. Naturally, this mechanism could only operate if the tax applied at the point of export does not put the official industry at a significant disadvantage compared to the informal market.

The formal sector has to be competitive for the miner who, in actual fact, has the formal or informal status imposed on him by the buyer. In Senegal, we recommend applying a single tax at the point of export which is not in excess of 2% of the market value. In addition, it is essential that this taxation also apply to temporary exports and processed products, in such a way that the trade in jewellery from the United Arab Emirates be subject to identical conditions to traditional exports and does not continue to be a financially favourable alternative, at the cost of Senegalese artisanal jewellery.

In Burkina Faso, the recently approved legislation, which reduces the export taxes and the licence fee to a single contribution of 1% would encourage the actors of the sector to sell in a formal way, on one condition that the export procedures would be simplified and strongly

[21] *Ibid.* see note **¡Error! Marcador no definido.**.

[22] Interview with Nabolé Ousséni, pit manager and investor in in the operation, 31/05/16.

speeded up. It currently takes 2 days to lead to an export, a delay that is highly penalizing in regard of the financial investments at play and of the swiftness of the informal supply chain.

In comparison, the official company for the purchase of precious commodities located in Ghana, the "Precious Mineral Marketing Company"[23], a state company for the purchase of artisanal gold and diamonds, offers a one-stop shop where transactions can be performed in a single operation and immediately. This proposition would be in harmony with the propositions made for Senegal. However, lowering the tax cannot be enough of a condition on its own. Maintaining a foreign exchange control and, more specifically, the export proceeds repatriation requirement, is one of the Gordian knots of the informality in the supply chain for gold, even more so in economies strongly dependent on imports which are, themselves, heavily taxed. By putting an end to the export proceeds repatriation requirement and allowing definitive exports without requiring foreign currency repatriation, traders could easily and legally export their gold and obtain foreign currency that would allow them to import other items. This suppression of the export proceeds repatriation requirement is also advisable for Senegal.

Harmonising export tax between the ECOWAS countries would also decisively cut down on the various commercialisation routes, and this harmonisation could be done on the basis of the community's Directive on the Harmonisation of Guiding Principles and Policies in the Mining Sector[24]. The regional public policy instruments, if they are transposed into the national legal frameworks, could be very effective weapons in the fight against the black market.

In the middle of the chain, there are many barriers, notably in Senegal. Whether this is the trading buying house, which must demonstrate that it has 20 million FCFA in capital in order to receive its licence, or the case of the regional trader who is regularly inspected by the customs officials during his journey between the mining zone and Dakar, these are two clear examples of the existing barriers that must be overcome by intermediaries in the chain in order to bring gold to the capital. If Senegal wishes to see these trading buying houses become a centralised point for the production of artisanal gold within the country, it is essential to facilitate their installation and their operation, from the supply of raw gold to its commercialisation nationally and internationally.

Therefore, a first measure would be to reduce the level of the minimum capital requirement. Similarly, there could be a policy encouraging the sale of local gold, such as an exoneration from VAT, for the trading buying house that decides to have its gold, or its waste gold – jewellery to be recycled, for example – sold locally. If a sales tax applies, it would be judicious to create a flat rate sales tax on gold from a trading buying house of a maximum of 0.5%, as a form of tax on miners' income and trading buying houses' profits. Lastly, to ensure real coherence in the market, it is fundamental that taxation and oversight are aligned between trading buying houses and jewellers, and that the differences in taxation between native gold and recycled gold are removed, given that once smelted, it is very difficult for the authorities to distinguish between the two when carrying out checks for sale and export.

The State's commitment to facilitate access to the formal market, the security of trade and transactions and support (technical, administrative and management) to the mining groups who wish to formalize their structure, are so many variables that can encourage the miner to take the decision to integrate the formal supply chain. Monitoring is necessary but it cannot be enough. It is by engaging a proactive and progressive policy at each stage in the supply chain, notably by informing stakeholders about the directions and the objectives of the policies in place, that the governments of Burkina Faso and Senegal can hope to put in place a

[23] https://www.facebook.com/pg/PMMC.Group/about/?ref=page_internal

[24] Directive C/DIR3/05/09 sur l'harmonisation des principes directeurs et de politiques dans le secteur minier.

formal supply chain. The analysis carried out in this study also highlights the need to operate in a coordinated manner at the regional level, notably to reduce the harmful effects of sectors operating through a commercial contraband hub like the one that exists in Togo.

5 Annexes

5.1 Persons interviewed

- Burkina Faso

Date	Name	Position/Role/Profession	Institution/location
31/05/16	Nabolé Ousséni	Mining team leader and investor	Gombélédougou
31/05/16	Harouna	Collector/buyer on site	Koumbia
31/05/15	Sambo Harouna	Local buyer	Gombélédougou
31/05/16	X	Artisanal mine team leader	Gombélédougou
01/06/16	Mohamed SISSÉ	Regional buyer	Bobo-Dioulasso
31/05/16	Kondambo Harouna	Local collector	Entedougou
02/06/16	Local director	SOMIKO trading post	Bobo-Dioulasso
02/06/16	Alexandre Tindano	Director General	BNAF
02/06/16	XXXX	Smuggler of gold to Togo	Ouagadougou
02/06/16	Dambina	Buyer	Ouagadougou
02/06/16	Saloufou Traoré	Safety Direct for Industrial Mining and Hydrocarbons	BUMIGEB
03/06/16	M. Karambrié	Director	ANEEMAS
03/06/16	Arnaud Kambiré	BONODON trading post/ forwarding agent	Ouagadougou
03/06/16	Olivier Douamba	Invoicing and Royalties manager	DGMG
03/06/16	Olivier DOUAMBA	Fees invoicing manager	Ministère des Mines / Ouagadougou
03/06/16	X	Jewellery	Ouagadougou

- Senegal

Date	Name	Position/Role/Profession	Institution/location
23/05/16	Adama Diop	Regional Director	Direction régionale des Mines et de la Géologie à Kédougou
25/05/16	Mamadou Drame	President	Fédération des Orpailleurs de la Région de Kédougou
30/05/16	Cheikh Diop	Consultant specialised in artisanal and small-scale mining	Kédougou
31/05/16	Henry Gueye	Chief warrant officer, Gendarmerie	Kédougou
01/06/16	Mbacké Mbaye Niass	Jeweller – Trader of gold and silver	Bijouterie Mame Cheikh Mbaye – Niass & Frères à Dakar

02/06/16	Saliou Thiam	Jeweller – Trader of gold and silver	Bijouterie Fass Paillote à Dakar Dakar
03/06/16	Mamadou Baïdy Gaye	Technical adviser	Ministère de l'Industrie et des Mines, Dakar
04/06/16	Me. Ibrahima Niang	Founder member of the National Jewellers Association of Senegal (and barrister)	Association Nationale des Bijoutiers, Dakar
04/06/16	Ibrahima Niang	Jeweller	Bijouterie La Solution/Gra- ziella,
05/06/16	Kassa Keita, Waly Camara, Heladj Sankoun, et autres mineurs artisanaux	President, Treasurer, Head of security	GIE Foukhaba de Bantaco – organisation minière
05/06/16	Cissé	Buyer	Bantaco
05/06/16	Kante	Department head, Gendarmerie	Bantaco
06/06/16	X	Jewellers from Kédougou market	Kédougou
06/06/16	Oumar Bâ	Former manager of the regional branch	DGS Diamond Gold Ser- vices – Laboratory and trading post at Kédougou
06/06/16	Office manager	Customs office of Kédougou	Kédougou
07/06/16	Woré DIAW	Forwarding agent	Dakar
07/06/16	Alioune Sarr	Technical adviser	Direction des Mines et de la Géologie, Dakar
07/06/16	Jewellery seller	Wholesalers	Tylène Market, DAKAR
08/06/16	Ndeye Penda Dione Diene	Group head of Analytical laboratories	Université Cheikh Anta Diop, Institut des Sciences de la Terre
08/06/16	Ngor Sarr	Head of the studies and regulations division	Direction de la Monnaie et du Crédit
09/06/16	Abdoulaye Lam	Jeweller	Bijouterie Aline Sitoe – Chez Yoro Lam, Dakar
09/06/16	Seydina Gueye	1) President 2) CEO	1) Réseau des Bijoutiers du Sénégal (REBISEN) 2) Comptoirs d'Or du Sénégal (COSEN) Dakar

09/06/16	Makhtar Niang		Comptoir Bankor (Dakar / Kédougou)
09/06/16	Yous-soupha Seck, Serigne Khalil Seck	Managers	Comptoir SENOR (Kédougou / Dakar)
09/06/16	X	Director	Comptoir d'achat BANKOR
09/06/16	Alioune Dione	IT Systems director	Direction Gé-nérale des Douanes
09/06/16	Abdourahmane Wade	Director of *Renseigne-ment et des Enquêtes Douanières* department	Direction Gé-nérale des Douanes
09/06/16	Moctar Kettani Doucoure	Coordinator	Direction Gé-nérale des Douanes
09/06/16	X	Forwarding agent, Dakar airport	